Rocky Mountain Medical Journal

Utah Presidential Addresses

Vol. 52—No. 10
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$3.50 Per Year

OUTGOING PRESIDENT'S ADDRESS, UTAH—INCOMING PRESIDENT'S ADDRESS, UTAH
PATHOGENISIS OF ATHEROSCLEROSIS—DEATHS OF UNBORN INFANTS IN COLORADO
PROBLEMS OF PAIN RELIEF AND ANESTHESIA IN DISASTER AREAS


WESTERN UNION
Ever see a "telegram" from your heart?
PARKE, DAVIS & CO.
Did Nitroglycerin Ernie settle a hectic ending in this picture story?
PARKE, DAVIS & CO.
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DO YOU KNOW THIS MAN?
PARKE, DAVIS & CO.
How to select a family doctor
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Let these experts on relaxing show you how to live with HIGH BLOOD PRESSURE
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THE GIFT THEY NEVER GIFT-WRAP...
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Something can be done for the child with EPILEPSY...
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Could you pass this 'medical' quiz?
What part of every prescription weighs nothing at all?
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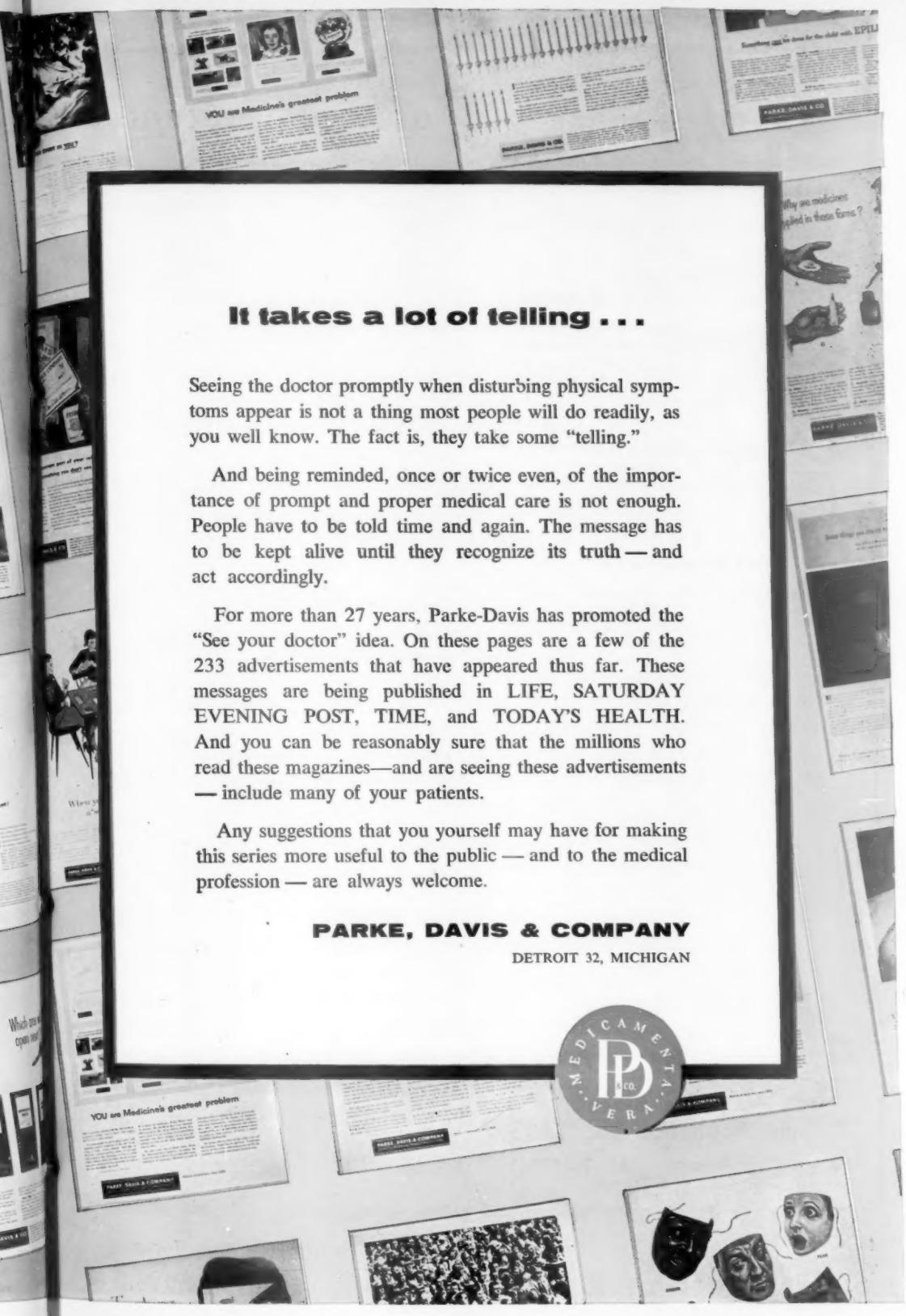

It takes a lot of telling . . .

Seeing the doctor promptly when disturbing physical symptoms appear is not a thing most people will do readily, as you well know. The fact is, they take some "telling."

And being reminded, once or twice even, of the importance of prompt and proper medical care is not enough. People have to be told time and again. The message has to be kept alive until they recognize its truth — and act accordingly.

For more than 27 years, Parke-Davis has promoted the "See your doctor" idea. On these pages are a few of the 233 advertisements that have appeared thus far. These messages are being published in LIFE, SATURDAY EVENING POST, TIME, and TODAY'S HEALTH. And you can be reasonably sure that the millions who read these magazines—and are seeing these advertisements — include many of your patients.

Any suggestions that you yourself may have for making this series more useful to the public — and to the medical profession — are always welcome.

PARKE, DAVIS & COMPANY

DETROIT 32, MICHIGAN

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Manuscripts: Scientific Articles, Case Reports, etc., from any state for which this is the Official Journal should be submitted to the Scientific Editor for that state as named in the Editorial Board, above. Other material from any participating state should be submitted to the Associate Editor for that state as named above. Manuscripts from outside the Rocky Mountain area should be sent direct to the Journal office. Manuscripts must be typewritten, double or triple spaced, using only one side of each sheet. It is the policy of this Journal to omit bibliographies.

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Terms of Officers and Committees expire at the Annual Session in the year indicated. Where no year is indicated the term is for one year only and expires at the 1956 Annual Session.

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FOR COMPLETE LIST OF COMMITTEES OF THESE ORGANIZATIONS SEE AUG., 1955, ISSUE

NEW MEXICO MEDICAL SOCIETY

NEXT ANNUAL MEETING: ROSWELL, MAY 2, 3 AND 4, 1956

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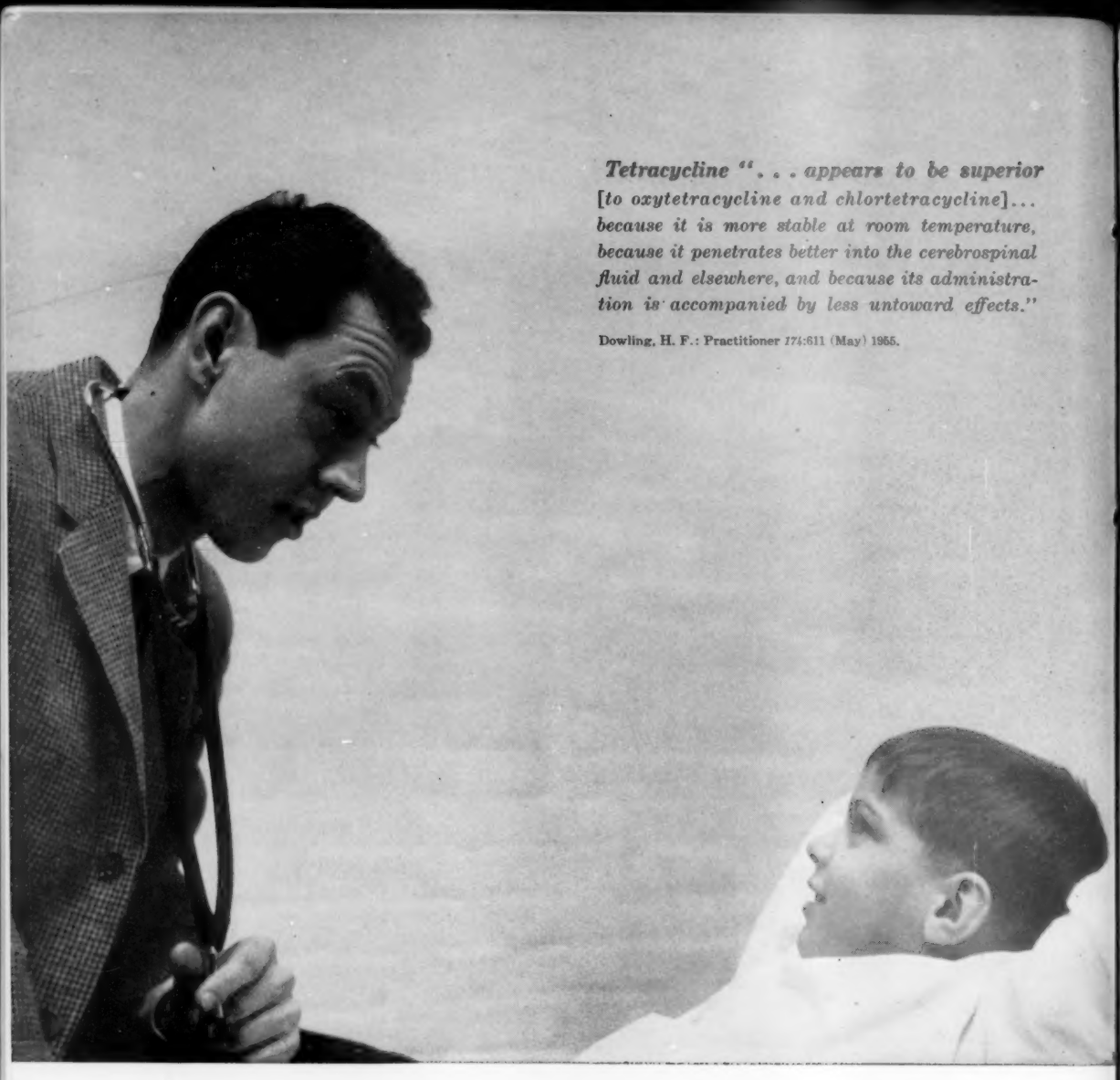
BASIC CEREAL BREAKFAST

ITEM	WEIGHT OF SERVING gm.	PROTEIN gm.	ENERGY calories
Fruit	77	0.4	68
Cereal (dry wt.)	30	3.2	110
Enriched White Bread (toasted)	50	4.2	130
Sugar	10	0.7	40
Butter	10	0.1	73
Whole Milk	480	16.9	330

Calories	750	Fat (gm.)	28
Protein (gm.)	25	Carbohydrate	100

*Literature available upon request. Address Nutritional Research Dept., Albers Milling Co., A Division of Carnation Co. 5045 Wilshire Blvd., Los Angeles 36, Calif.



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Dowling, H. F.: Practitioner 174:611 (May) 1955.

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* *RATNER, B., AIKMAN, H. L., and THOMAS, J. S.: Allergenicity of Modified and Processed Foodstuffs, Annals of Allergy, Vol. 10, No. 6, Nov-Dec. 1952.*

We will be happy to send reprints of the above quoted article upon request. Address P. O. Box 866, Dept. PP

THE BIB CORPORATION *JUICES FOR BABIES—JUICES ONLY!* **LAKELAND, FLA.**

Making the Diabetic Diet fit...

Your patient may feel an outsider both at home and away from home when diabetes upsets his eating habits. Of course, a measured diet is vital. The trick is to fit that diet as closely as possible to the patient's personal preferences and way of life. Here are some diet "do's" to help in planning the menus.

At home—

Try to adapt favorite recipes to the diabetic diet: Then select vegetables, beverage, and fruit or dessert to complete the diet prescription for the meal.

Suggest that measured portions be served in dishes that fit the serving. A small portion on a large plate is not a happy prospect.

Where possible, let your patient use a food exchange list. He'll delight in the variations it provides.

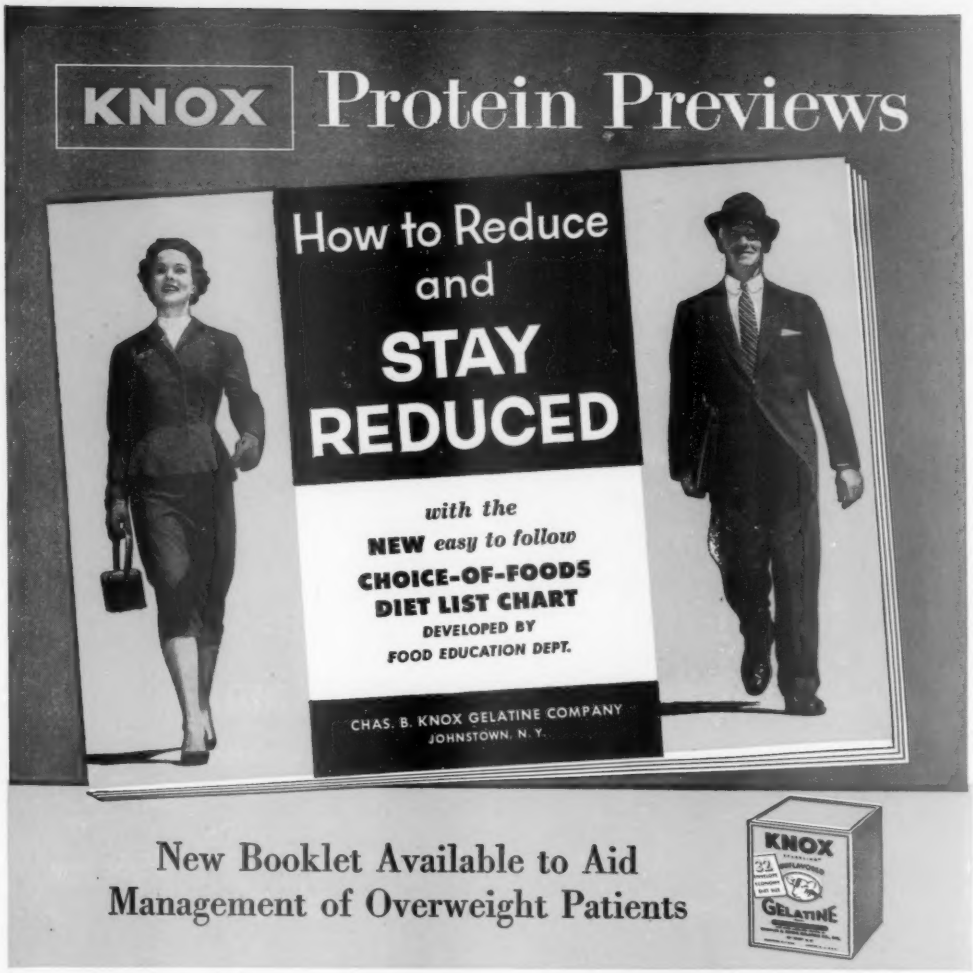
Away from home—

Explain that insulin demands food with the urgency and regularity of an alarm clock. If a dinner party will be late, suggest a light snack at the usual mealtime with a corresponding caloric reduction in the delayed meal.

Allow extra carbohydrate for extra activity. And have your patient carry hard candies as a precaution against insulin reaction.

If possible, plan low-calorie wafers in the diet for times when others nibble canapés or chocolates.

A diet that fits in smoothly with your patient's family and social life means you'll have his fullest co-operation, and he'll lead a happier life.



The 1955 edition of the well-known Knox "Eat-and-Reduce" booklet eliminates calorie counting for your obese patients. This year's edition is based on the use of Food Exchange Lists[1] which have proved so accurate in the dietary management of diabetics. These lists have been adapted to the dietary needs of patients who must lose weight.

The first 18 pages of the new booklet present in simple terms key information on the use of Food Exchanges (referred to in the book as Choices). In the center, double gatefold pages outline color-coded diets of 1200, 1600, and 1800 calories based on the Food Exchanges. Physicians will find these diets easy to revise to meet the special needs of individual patients.

To help patients persevere in their reducing plans, the last 14 pages of the new Knox booklet are devoted to more than six dozen *tested*, low-calorie recipes. Please use the coupon below to obtain copies of the new "Eat-and-Reduce" booklet for your practice.

1. Developed by the U. S. Public Health Service assisted by committees of The American Diabetes Assn., Inc. and The American Dietetic Assn.

Chas. B. Knox Gelatine Co., Inc.
Professional Service Dept. SJ-10
Johnstown, N. Y.

Please send me____copies of the new illustrated Knox "Eat-and-Reduce" booklet based on Food Exchanges.

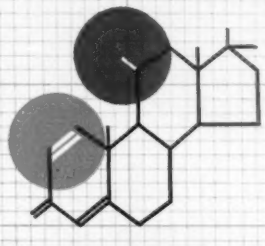
METICORTELONE possesses antirheumatic and anti-inflammatory effectiveness and hormonal properties similar to those of METICORTEN,[1-5] the first of the new Schering corticosteroids. Both are three to five times as potent, milligram for milligram, as oral cortisone or hydrocortisone. METICORTELONE and METICORTEN therapy is seldom associated with significant water or electrolyte disturbances.

METICORTELONE is an analogue of hydrocortisone, as METICORTEN is of cortisone. The availability of these new steroids, both discovered and introduced by Schering, provides the physician with two therapeutic agents of approximately equal effectiveness.

METICORTELONE is now available as 5 mg. buff-colored tablets, scored, bottles of 30 and 100. In the treatment of rheumatoid arthritis, dosage begins with an average of 20 to 30 mg. (4 to 6 tablets) a day. This is gradually reduced by 2.5 to 5 mg. until daily maintenance dosage, which may be between 5 to 20 mg., is reached. The total 24-hour dose should be divided into four parts and administered *after meals and at bedtime*. Patients may be transferred directly from hydrocortisone or cortisone to METICORTELONE without difficulty.

Telone

PREDNISOLONE, SCHERING (METACORTANDRALONE)



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- replacing the older corticosteroids in rheumatoid arthritis[1,2,6-8] intractable asthma[9-12] eye disorders[5] certain skin disorders such as disseminated lupus erythematosus,[13,14] acute pemphigus,[13,15] atopic dermatitis[15] and other allergic dermatoses
- more active than hydrocortisone or cortisone, milligram for milligram
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METICORTEN is available as 5 mg. scored, white tablets in bottles of 30 and 100.
METICORTELONE,* brand of prednisolone (metacortandralone).
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Rocky Mountain Medical Journal

OCTOBER, 1955

Colorado - Montana - New Mexico
Utah - Wyoming

"My Ola Chief"

THROUGHOUT medical as well as political history stand certain traditional publicity-seeking technics. Those that are employed in politics are often identified immediately by the mature voter. Those in medicine are usually somewhat more subtle.

One of the most prevalent technics among doctors seems to have stemmed from early in man's development—even before written history:

Conjure up to yourself the picture of a primitive people, each person with the cares of feeding himself and his immediate family and none bothering with each other save when it suited one to steal another's food, or to protect his own. Imagine the interest aroused, however, when one of these people built a weird conglomeration of stones, bones, and wood which he called, "The Shrine of the Great and Omnipotent One," before which he consecrated himself constantly. Do you not see the attention, the service, and especially the free food that this pseudo-intimate of The Great and Omnipotent One would receive? And the more he touted the capabilities of this One, the greater would be his own prestige.

One thinks of this picture when doctors, who have spent all too brief a time in the clinic of some prominent figure in medicine, constantly stand up in meetings to make some irrelevant remark prefaced by the ostensibly self-effacing words, "My Old Chief——"!

P. J. B.

Self-Inflicted Tattoos

AN alarming number of self-inflicted tattoos are now being seen by physicians, psychologists, and probation officers among 'teen agers. Most of them—three out of four—are girls, many of them before the Juvenile Court presenting, among their other problems, feelings of guilt and inferiority exemplified by self-mutilation. Apparently gang membership gives a feeling of security which these young people desperately need. In addition to such marks as dots, crosses, hearts, and daggers are three- and four-letter words. These tattoos are found upon hands, arms, legs, and faces within easy reach of the right hand in right-handed individuals and vice versa in the left-handed.

Invariably the youngsters thought it was a good idea at the time, but they later came to regrets, especially when looking for jobs or applying for membership in the armed services and government agencies. The latter have investigated origin of the marks in order to rule out subversive organizations. It is found, however, that they either represent juvenile gangs or simple frustration. India ink and a common pin have usually been used and removal of the marks is not simple. Usually the pigment is too deep to be removed by superficial abrasion without botching the pigment or resulting in hypertrophied scar. Excision and skin grafting may be required. Removal is nevertheless indicated in a salvable individual.

Physicians and psychologists have done a

great deal of speculating regarding this modern manifestation of the primitive human tendency to self-adornment or mutilation. Furthermore, one wonders about scars which are mental and emotional as well as physical. 'Teen agers must be kept busy that the devil shall not find work for their idle hands to do.

Healthful activity and spiritual guidance provide answers to wayward teen agers. Family doctors and ministers, along with court and school advisors, can play singularly important parts in a preventive way. And when it comes to treatment, such must usually be mental and emotional—as well as physical.

Socialized Medicine Not a Dead Issue

ENLIGHTENING comment upon Great Britain's socialized medicine plan was presented by Dr. James R. Fox of Minneapolis to the Conference of Presidents and Other Officers of State Medical Associations at Atlantic City last June. Dr. Fox spent some time practicing socialized medicine in Great Britain and his comments are personal and "right off the griddle." His subject was timely indeed for, contrary to popular impression, socialized medicine is anything but a dead issue here or abroad. Said Dr. Fox, ". . . it will never be dead."

In England, general practitioners practice in offices, homes, and nursing homes—not in hospitals. But the picture is not as bad as commonly believed, for the nursing homes have good facilities and excellent nursing. However, specialists have many and greater advantages; this results in a tangible split between specialists and general physicians. The fission was not necessarily created, but has been widened, by socialized medicine.

There are other significant differences in medical practice in the old and new worlds. For example, Great Britain has 50 million people and 35,000 physicians; Norway has 3 million, Sweden 7 million and Denmark 4 million people within the areas the size of some of the States in America. Many of their problems differ from ours, and some social experiments have long preceded ours. It was not the Labor government which started socialized medicine in England; it was started in 1911 when the Conservative group established the panel system. In 1948 Aneurin Bevan suddenly come into power and made socialized medicine a political football rather than improvement in conditions of housing, food, and health control. It was supposed to cost $510 million, but in 1952 it was up to $1.5 billion. The doctors had been led to believe that the plan was just a gigantic panel system for the entire population and somehow would be better and easier than the old system which involved 4,000 patients for each physician, wherein standards could not possibly be high. We all know what happened, since people anywhere are inclined to "grab" something for nothing. Dr. Fox interjected an interesting comment which sums it up: Two physicians in Edinburgh, each in practice over twenty-five years, stated the busiest single day of their lives was when King George died. The pubs and cinema were closed, and there was no place else to go, so people went to the doctor! Further comments were made concerning nuisance fees for prescriptions, spectacles for every occasion, wigs and prostheses. In other words, it seems to be a part of human nature to over-utilize communal privileges which, on the surface, appear to be free. And, like the fable of old, the Golden Goose is killed.

Under the scheme of socialized medicine many general physicans are not unhappy in terms of remuneration, and many specialists are pleased, especially with retention of a portion of private practice among the few who are able to afford it. A number of teachers and institutional workers are pleased with assured, if not high, incomes. Though we cannot compare any of the old world's system of medical practice with our own country and its requirements, there is one certain fact—that socialized medicine is the "foot in the door" for total socialization. The fight of the American profession to forestall it has been our duty, which is not only what we do for our patients in terms of medicine, but what we do for our country in terms of good for its people and their future!

Outgoing President's Address . . . Utah

CHARLES RUGGERI, JR., M.D.
Salt Lake City

IT HAS been an honor, a privilege, and a great experience to have served as the leader of the medical profession of Utah. While there are some unpleasant duties to perform, these are outweighed by the more pleasant ones. I have found it a difficult task to try to please everyone in and out of our organization. I know that I have not done so. However, in all my decisions I have had but one goal in mind: how best to advance the cause of medicine in the interest of providing better medical care for our people, and at the same time to protect and defend the rights of the physician as a citizen and as a medical man. I have not been unmindful of the moral and spiritual values involved in the practice of our profession. I have been constantly aware of the grave responsibility which our profession owes to the people. I have tried to direct our policies with faith in our profession; faith in our people; and faith in our Creator. In the practice of medicine today we can no longer isolate ourselves to the sole duties incident to the technics of our own disciplines. We have to be good doctors and good citizens. I have tried aggressively to promote better understanding between ourselves and the public.

Viewed in this light, one can feel a sense of pride in the accomplishments of our organization. We have a progressive and dynamic organization, active and full of spirit; a virile, restless organization which, with honor, is unafraid to boldly do its full part in those activities which make for progress and create a better understanding between peoples.

With the assumption of these duties and responsibilities the work of our organization has grown steadily. The Executive Office becomes increasingly more important to us. Early in my administration, it was apparent that a reorganization of the Executive Office was urgently necessary. Mr. Harold Bowman, our Executive Secretary, undertook the task of reorganization, and has succeeded so well that we now have an efficient, smooth-working office with enthusiastic and loyal personnel of whom we are all proud. The work at our Executive Office is now handled expeditiously and efficiently, and with tact.

One of the major problems which confronted your officers early in their administration arose when the Joint Commission on Accreditation of Hospitals removed the four major general hospitals of Salt Lake City from the list of accredited hospitals. Our Association thought it wise to invite Dr. Kenneth B. Babcock, Executive Director of the Joint Commission, to come to Salt Lake City and discuss this problem. The invitation was accepted and Dr. Babcock did much to clear the atmosphere. At our urging he promised to do what he could to get an early re-examination and re-accreditation of the hospitals. This plan succeeded, and the four hospitals were re-accredited at least three months earlier than otherwise

would have been possible. Much credit for this is due the medical staffs and boards of trustees of our hospitals, the hospital administrators and Dr. Babcock for the fine spirit of cooperation shown.

No one will argue that accreditation of hospitals is of fundamental importance in the development and maintenance of high hospital standards of medical and hospital care of patients. There remains in the minds of some, however, a question as to the arbitrary and precipitant method used to dis-accredit our hospitals. Let us hope that a study by the Board of Trustees of the American Medical Association will reveal a better system of procedure; one which will not in any way cast reflections or destroy public confidence in medical men and hospitals.

Of more than passing interest to every one of us is the problem of hospital-physician relationship, and the problem of specialization and hospital privileges. Charles L. Farrell, M.D., President-Elect of the National Conference of Presidents and Presidents-Elect of the Rhode Island Med cal Society, has expressed my sentiments so well I would like to quote from an address delivered by him on June 5, 1955, in Atlantic City. The American Hospital Association publishes a booklet for governing boards of hospitals called "Trustee." He quotes from an issue of Trustee:

> "The physician should not have to go about in fear of arbitrary or capricious action by the medical staff or the trustees of the hospital that might terminate his appointment, or curtail his privileges without cause." Again, "Neither the administrative nor the medical staff has any right to interfere with his (the doctor's) management of his patient. So long as he does not exceed his privileges, or violate proper practice, the physician has the right to practice his profession as he sees fit in the hospital. The physician has a moral though no legal right to security of tenure on the medical staff of a hospital, if he has abided by the rules and regulations of the hospital, practiced good medicine, and maintained exemplary conduct.
>
> "These are presumed to be sincere and honest statements and are indeed welcome. They should be observed to the letter. Whether or not they are truly observed is the responsibility of local physicians."

On specialization and hospital privileges, he quotes Dr. E. J. McCormick, Immediate Past President of the American Medical Association, addressing the Academy of General Practice in Cleveland in March, 1954: "Hospitals should not be centers for specialists and it never was the ideal of the American Medical Association or the American College of Surgeons, or any of the boards to establish a system whereby qualified physicians would be denied the facilities necessary to give good medical care to the people."

Medical Economics quoted Dr. George M. Lewis of New York as follows:

> "It is true that the onus of proof might well be on a non-certified applicant for a hospital position to demonstrate his competence. However, once that competence has been proved—either through long service or otherwise—discrimination against him as 'non-certified' cannot be justified. The Board certificate should never be used as a weapon."

Dr. Farrell adds:

> "Let us make that a reality—not just a statement!
>
> "The Joint Committee on Accreditation of Hospitals in Bulletin No. 7 states:
>
> " 'Formal resident training, College of Surgeons Fellowship, or Board Certification are all excellent criteria, and the physician desiring to do surgery should be encouraged to set them as his goals. Recognition of the worthwhileness of the above criteria cannot be over-emphasized . . . the frank, brutal truth remains, however, that they sometimes, though not often, are only a piece of paper; that time can warp a man's judgment and poor health can slow the facilities of a surgeon's hands.
>
> " 'Merit alone is the only criteria for judging a physician's surgical ability.'
>
> "The above quotations all reflect sincere, honest opinion, and if properly applied, would obviate a great many of the present day inequities in hospital staff apointments.
>
> "How often, however, have the very criteria designed to protect doctor, hospital and patient been subverted at the local level by various selfish forces acting under the guise of 'elevating standards.' "

The physicians of Utah cooperated in every way in carrying out the poliomyelitis immunization program instituted by the National Foundation for Infantile Paralysis. After the unfortunate experience following

the use of anti-polio vaccine in our sister state of Idaho, the Utah State Medical Association, in cooperation with the Utah State Board of Health, the Salt Lake City and Salt Lake County Boards of Health, and the eminent scientist Dr. Louis P. Gebhardt of the University of Utah Medical School, did much to allay fears and dispel the confusion in the minds of the people. After a delay to recheck the vaccine in use here, the program of immunization of first and second-grade students proceeded to completion without any complications.

Experience would indicate that we have a new and potent weapon to use in the prevention of poliomyelitis. One might question, however, the wisdom of the method used by the National Foundation for Infantile Paralysis in announcing the results of the trial tests of the Salk vaccine and in announcing the proposed program for the prevention of poliomyelitis. Probably the time-tested method of presenting full and complete reports on medical research before established groups, allowing free discussion and criticism, and the publication of such reports in recognized **scientific journals** before we resort to widespread use of any new methods of treatment, or new methods for the prevention of disease, would be the better procedure.

The Council, through and in cooperation with the Utah State Board of Health, this year requested the United States Public Health Service to conduct a health resource survey in Utah. We felt there was a need to improve the general health of the workers as well as to control the health hazards associated with the job. Utah is rapidly changing from an agricultural to an industrial state. It was felt that progress should be made to improve and preserve the health of the workers and executives in industry. We have had several preliminary meetings with representatives of the United States Public Health Service and have been informed that the survey will be commenced this month. We hope that as a result of the survey we will receive information on the evaluation and control of health hazards, and that practical means of providing preventive health services will be indicated. It has been suggested that the survey have the following objectives:

1. To determine the existing medical and nursing resources in the field of occupational health.
2. To analyze the contributions existing public health programs can make to the advancement of occupational health.
3. To survey a representative group of industries to determine the extent of health problems and to determine the need of industry.
4. To devise a plan for the coordination of the community's health resources in the best interest of occupational health.

In the fall of 1954 the Kennecott Copper Company discontinued its medical care program under the contract system. In its stead a program was set up administered by insurance carriers. This changeover was an event which will have a profound effect on the future of industrial medical practice in Utah. At the onset of this new program a meeting was held at which your Council, the Chairman of the Industrial Health Committee, representatives of the Salt Lake County Medical Society Executive Committee, Kennecott Copper Company, and about 25 union leaders representing the workers of the Kennecott Copper Company were in attendance. At this meeting your President enumerated certain basic principles of policy which we would follow in rendering medical care to any group under any system:

1. Free choice of physician.
2. That the Utah State Medical Association is not a bargaining agency and therefore will not bargain on medical care.
3. That services will be rendered by the physician of the patient's choice at the normal and usual fee charged by the physician for the specific services rendered.
4. That in return, we promise to render the best medical service possible.

The Industrial Health Committee, under its wise and able Chairman, Dr. James Z. Davis, was appointed to act as the Liaison Committee to aid and facilitate the application of the above principles in the new Kennecott Copper Company program. Their work has been outstanding, and has accomplished much in making this program a success. The Association's appreciation and thanks to them!

I hope that the above basic principles of policy will be embodied in a resolution and

adopted by the House of Delegates as the policy for all physicians in our State to follow.

It has always seemed rather ridiculous to me that physicians should render medical service under contract or for groups at a rate cheaper than is charged the individual private patient. There is no reasonable excuse for private patients to subsidize any other groups. Each should pay a just and reasonable fee to the physician for medical services rendered.

This might be a good place to speak of a serious defect in many insurance contracts, and in our own Blue Shield Service Plan. I refer to the fact that many contracts do not provide a fee for consultation. Consultations have a very proper and definite place in the practice of better medicine, and as such, compensation should be provided. It is suggested that consultations always be had and made a part of the medical record when: (1) the patient is not doing well; (2) where any suspected reactions, untoward occurrence or complications or sequelae develop; or (3) whenever the patient or his family is unduly complaining or expressing dissatisfaction.

Your Executive Committee has held a number of meetings with labor leaders during the past year. It was felt early in this administration that better public relations ought to exist between labor and the medical profession. A better understanding of each other's problems might be of mutual benefit. More and more labor is securing at the bargaining table "fringe benefits," and these in many instances concern medical care for the worker and his family. It is important that the medical profession and labor have a common understanding of mutual problems. It is important also that better cooperation exist between the two groups. The labor leaders that we have met are an intelligent group of people, and are willing to cooperate with us for the common good. It was a revelation to me to hear from the labor leaders themselves that they are opposed to contract practice and in favor of free choice of physicians as the means of securing better medical care for themselves and their families; that they don't think medical fees are too high; that physicians are entitled to just fees for services rendered; that they are interested in complete medical care for themselves and their families, which would include not only the treatment of disease, but also its prevention. And, lastly, that these meetings between the two groups should be continued and expanded.

While the physician is a member of a profession whose primary object is to render service, we must never permit anyone to lose sight of the fact that he is also an individual who earns his living from his work, and like other men, he is "worthy of his hire." With this objective in mind, your Fee Schedule Committee under the able chairmanship of Dr. W. R. Rumel, has continued its studies in setting up a master fee schedule to guide us in our charges. It has been recognized for a long time that there are greater financial rewards for the practice of surgery than for the practice of medicine. This discrepancy has resulted from a low public evaluation of medical and diagnostic services as compared to the high public evaluation of surgery. Our Fee Schedule Committee, boldly striking out in new and untried fields, has attempted to set up a suggested master fee schedule based on the relative value of the whole field of the practice of medicine and surgery. This scale is based on points and not dollar values. An attempt is made to indicate to the doctor and to the public the proper relationship between fees for the various medical and surgical services. This is a new and sound approach to this age-old problem. While considerable progress has been made, continued study is necessary to eliminate any inequalities and to make adjustments as experience dictates. We owe a vote of thanks to this committee, and especially to its Chairman, Dr. W. R. Rumel, for its outstanding work.

This year your President appointed a Resolutions Reference Committee, which I hope will be continued as a permanent committee. Its function is to study all resolutions which are presented to it during the year. This of necessity will require the appearance before the committee of any doctor who is interested in presenting his views

on the resolution in question. The committee then reports the resolutions to the House of Delegates with its recommendations. In this way it is felt that the work of the House of Delegates will be expedited, and further, by this preliminary study it will be in a better position to make more intelligent decisions.

I would like to propose a subject for study which has a bearing on the proper functioning of our organization. We have now in our State a number of Special Societies which function more or less as scientific organizations. A few have at times passed resolutions and taken action on policies which might more profitably have been the work of the State Association. It is not intended in any way that there be any interference with these societies in their scientific program or in their discussions of any medical problems. It is suggested, however, that any action taken on policy of whatever nature be referred to the State Association for study and final action. On several occasions this past year your officers have had a difficult time in preventing harm to the medical profession by the action of certain special groups. There is no question that problems arise which have a greater significance to the special groups than to other physicians. Yet there is no question that if any policy proposed has merit, much more can be accomplished by using the force of the state organization in securing the desired ends.

I would recommend, therefore, that a committee be appointed, consisting of the president of each special society and representatives of the Council, to make a study of this problem and report its findings to the House of Delegates at the next annual meeting.

The tendency of a small minority of our membership to take unilateral action counter to the policies adopted by the State Medical Association is not only embarrassing, but frequently frustrates our best efforts to protect the physician's and the patient's best interests. The policies adopted by the majority of our members should prevail. This is not intended to prevent the minority from continuing efforts within our own organization to secure whatever changes in policy they may desire. Through the component societies, before the various committees, the Council, and the House of Delegates, surely there is ample provision for the expression of one's views. Let us proceed in an orderly manner in our deliberations, and let us all be united in our efforts.

Our organization is growing in stature and in influence, both locally and nationally. This has been the result of the efforts which you as individual members, the committees, your officers, and the delegate to the American Medical Association have exerted. I could not complete my report to you without recognition of the outstanding service rendered to us by Dr. George Fister, our Delegate to the American Medical Association. To Dr. Eliot Snow, our Alternate Delegate, for his interest in and special service to our organization, we also extend our thanks. We are proud of both of them.

While the American Medical Association is a national organization of medical men, it is in the final analysis YOU and I. I think it is necessary, therefore, that you and I express our opinions about policies which will be discussed at the national meeting. We cannot expect our Delegate to the American Medical Association to carry out our wishes if he does not know what they are.

To quote Dr. Charles L. Farrell again:

> "This requires a degree of effort which so far too few physicians have been willing to give. Many tell me they are 'too busy.' They imply that they are busy with that first duty of every physician, i.e., care of the patient. They are not too busy, however, to do all the things necessary for their own economic welfare. They manage to find time to buy a car—arrange for a vacation—pay their taxes and do all the things which, if neglected, would result in their own economic chaos. When it comes to Medicine's economic welfare—they 'let George do it' until something occurs that they don't like. They then speedily and indignantly demand to know what happened and what is to be done about it."

This year your Council discussed with our Delegate various policy problems, and I am sure that this aided him materially. His position nationally is considerably strengthened when he knows that he can speak with confidence, expressing the views of our State organization. I believe that this prac-

tice should be followed in the future for the good of all concerned.

In the normal routine business of our Association, encompassing as it does in this modern age not only medical problems, but social, economic and other problems as well, some questions of a legal nature arise. It has been necessary for us to consult our attorney in order to keep us out of any legal entanglements. We feel that the Executive Office has been strengthened tremendously, and its effectiveness increased by having the legal firm of Ray, Quinney & Nebeker as our legal representatives. They are well trained in medico-legal affairs, and loyal and enthusiastic supporters of the medical profession.

In my President's letter of July 1, 1955, which was published in the Bulletin, I said, "Everybody wants to get into the practice of medicine whether they are qualified to do so or not. As ever growing evidence of this tendency, we have only to recall the encroachment of our hospitals in the practice of medicine; the growing tendency for drugless healers—naturopaths, chiropractors, and others—to expand their fields from one in which they are presumed to have some training, into the field of the practice of medicine involving the practice of obstetrics, minor surgery, administration of drugs, vaccines, etc., for which they are woefully and pitifully untrained and unqualified."

How refreshing it was, then, to read an opinion written by the Attorney General of the State of Utah, released on September 3, 1955, in which he states: "Naturopaths may not prescribe drugs under the Utah law, and any licenses so entitling them are void." Our statutes provide that naturopaths may be licensed for the treatment of human ills "without the use of drugs or medicine and without operative surgery." He further states that "the medical licensing law is unambiguous and not subject to misrepresentation." He stated that "if the Department of Registration has licensed naturopaths to administer or prescribe drugs or to practice surgery of any kind, then such licenses are void as being beyond the scope of the Department to license."

The Bulletin has proved itself of inestimable value to our organization. I am sure it has fulfilled all the hopes and aspirations of Dr. Kenneth B. Castleton, President in 1952-53, under whose leadership the publication was inaugurated. It not only is a means of keeping our members informed of our various activities, but is also a financial success. Much of the credit of this successful venture is due to our Executive Secretary, who is also the Managing Editor, and to our Editorial Staff. To them, and to our advertisers, we extend our sincere thanks.

For a long time the need for larger and more adequate office accommodations for both the State Association and the Blue Shield has been recognized. We have been endeavoring to secure a site with suitable parking facilities where a new, modern and adequate office building could be erected. I am happy to announce that the Salt Lake City Commission on September 1, 1955, tentatively approved the sale of city-owned land just west of the new Red Cross building in the Fort Douglas area, to the Utah State Medical Association. Final approval of the sale is automatic if the City Legal Department rules that it is legal for the city to sell the land. There would then remain the details of the sale—such as the amount of land, the purchase price, the exact location, etc. I would therefore recommend to the House of Delegates that authority be given to the Council to appoint a Building Committee, with power to proceed with the necessary details; this committee should also have power to proceed with the development of plans and to devise means for the construction of a building. I would also recommend that all monies earned from our Bulletin be placed in the Building Fund.

Finally—we should never forget that we are all members of a great and honored profession, and not just members of a craft or business. Being a member of a profession implies not only an adequate knowledge and skill in the art and science of the practice of medicine, but also a deep devotion to our calling. If with this we have a warm, sympathetic understanding, and practice our calling with due humility and faith in God, we shall reach that desired goal—the perfect physician.

Incoming President's Address . . . Utah

RALPH O. PORTER, M.D.
Logan

IT IS not within my rhetorical province to adequately express my feelings in having been elected to this high position of honor and trust. I do not crave political fame. I have no high ecclesiastical ambitions. I have neither desire or ability to become a business or financial leader. My talents are not in the arts. But I guard jealously the privilege of belonging to a fraternity of highly trained, highly respected professional citizens intent upon bringing the fruits of science, the artistry of suggestion, the inspiration of confidenec and the dissemination of hope to shattered nerves, unstable minds and broken physiques. Truly it can be said we are our brother's keeper, and that concept of our calling should never be submerged.

We have been divested of the halos and the shrouds of mystery of former days. The leveling influence of mass education and visual and auditory means of learning have removed us from our near celestial position to terra-firma and humanity. Thus our problems of public relations and of maintaining a position of high esteem and leadership have multiplied enormously. The ever increasing activities and influence of opportunists who consider doctors fair game in all seasons, and the willingness of doctors and insurance carriers to compromise and make out-of-court settlements, adds to the confusion of the public. The intrusion of conscienceless and untrained cults into the field of therapeutics, promising cures, playing upon the credulity of the unsuspecting by questionable psychological methods but never signing death certificates, adds to our dilemma. Certainly the task of the physician is much more than the application of medical knowledge to human physical illness.

The medical profession stands out as a beacon to all other groups and professions in the matter of self-imposed discipline of its members in their professional relationship with each other and their ethical and moral conduct with patients. However, in our zest for increased scientific knowledge and our ever increasing demands for higher developed technics, skills and specialization, we have neglected in our training the important art of seeing people through the eyes of the patient, sympathetically understanding the people's fears and phobias, and their social, enviromental, genetic and economic problems as well as their physical pathology. Too often we put our diagnostic skills to work and come up with an answer satisfactory to ourselves, write a prescription, and send the patient to the business office and on his way. Chances are the diagnosis was correct and the prescription a proper one, but the patient leaves in doubt, lacking confidence, misinterprets what he heard and saw—fertile soil for the seeds of discontent.

Public relations is the biggest problem of the medical profession today. New methods of diagnosis, new treatments, new technics can safely be left to the research scientists and the medical and pharmaceutical foundations where the general public is but slightly concerned. But the art of applying that knowledge to the masses of humanity is the jutting stone upon which we are stubbing our toes. The principles of good public relations and codes of ethical conduct can be formalized and written into the working constitutions of our highly organized associations. But the realization and achievement of good will and confidence is every doctor's problem.

Recently I was on a week-end fishing trip with some friends. Knowing one of them had been in questionable health from some bowel disorder I inquired of his health. This was his reply: "I tried to follow my doctor's

advice and treatment but had recurrences. I decided to consult a new younger doctor who made some dietary eliminations and regulations and I have gained weight and had no more trouble since." Not being satisfied with his complete triumph, the younger doctor felt inclined to make an uncomplimentary remark to the patient concerning the older doctor's incompetence. My friend went on to say: "I went back to the first doctor in the spirit of helpfulness and told him what I had done and the doctor said: 'I thought something had happened for I have missed that 10- or 15-dollar check each month'." The patient was very angry. I tried to explain that the remark was purely facetious, but to him it was serious and the remarks that followed were not complimentary to the profession. Two public relations blunders, one by each doctor, hurt all of us.

While I say public relations is every doctor's business I do not mean it is not organized medicine's business also. This problem has been recognized for some time and many steps have been taken by the A.M.A., State Societies, and County Societies to put the doctor in a more favorable light before the public. I commend all of these efforts although some, such as county panel discussions, radio and TV broadcasts, are too recent properly to judge their effects and importance. It may be necessary to modify some of them to achieve the best educational and public relation aims.

The field of medicine is more and more being invaded by, first, pure charlatans and quacks. In this category are the "cancer specialists" whose diagnostic frauds are convincing to otherwise clear thinking people. Their cures (?) are near 100 per cent, which is the proportion of benign lesions they treat. But the patients gladly display disfiguring scars as the price they paid for their lives! This has developed into an organized business racket for which a solution is urgently needed.

Second: The quasi-professionals. These are the chiropractors, naturopaths and scores of other cults whose systems defy science and reason but whose advertising and mass psychology are convincing. If our patients experience relief of pain and a feeling of well being from the manhandling they get from these so-called practitioners we probably have ourselves to blame for neglecting the important field of physiotherapy.

Third: The better trained but woefully limited who are now attempting to gain by regulations and legislation what they did not get by training. I refer here especially to the optometrists. Not satisfied with a cooperative attitude of medicine and a desire on our part to help strengthen their curriculi and improve their training, they now have decided it is time for them to take over the entire field of visual care by state legislation, excluding oculists, ophthalmologists and dispensing opticians. This may sound fanciful, alarmist and absurd, but I declare in all seriousness it is real, actual and in the process of accomplishment. Let me quote the first three resolutions adopted by the 1954 Annual Congress of the American Optometric Association at Seattle, Washington, June 20-23, 1954. Published in July Bulletin but bear repeating.

Official Optometry says: 1. "The field of visual care belong exclusively to optometry. Resolved, that it is the stated policy of the American Optometric Association in convention assembled that the field of visual care is the field of optometry and should be exclusively the field of optometry."

2. Official Optometry says: "Refraction is an optometric function which physicians perform merely by virtue of specific exemptions in the optometric statutes; and these exemption should be removed." . . . Throughout the years the optometric laws of the several states have granted exemptions to certain groups and classes. "Resolved, that the individual state associations are recommended to make serious study of the optometry laws prevailing in their states to the end that exemptions be restricted, limited, and utimately eliminated."

3. Official Optometry says: "Services performed at the direction of the opthalmologist are an encroachment upon optometry. "Resolved . . . that encroachments by un-

trained, unqualified and unlicensed persons into the exclusive field of optometry be prevented through the established enforcement agencies in the respective states."

Oklahoma was the first state to feel the impact of these resolutions. The law passed by the Oklahoma Legislature declares that optometry is a "learned profession." It also prohibits other healing professions from practicing optometry. The latter prohibition points its finger directly at the profession of medicine, and is evidently designed to restrict the number of M.D.'s who compete with optometrists. There is a provision in the law that is designed to take the dispensing optician entirely out of business by requiring that he can only furnish glasses under the direct supervision of an optometrist or a physician.

It is thus seen that the optometrists are able to accomplish two objectives in Oklahoma:

1. They virtually put the dispensing optician out of business.

2. They further limited the "permission" of opthalmologists to "encroach" upon optometry's claim of the whole field of eye care.

There is the story of optometry's intentions and aspirations! By the adoption and publication of the above resolutions, and by their actions in Oklahoma, optometry has unmasked itself. It has exposed for all the world to see the fraud which they intend to perpetrate on the American public.

The medical profession has but one choice —to take such action as it deems necessary in the interest of the welfare of our people. We cannot stand idly by and permit any group to use the people of our country as pawns for monetary gains. Permit the elimination of the dispensing optician and the elimination of ophthalmologists from the field of visual care, which can encompass the entire field of opthalmology, and one of the most highly developed fields of medical practice will pass out of our hands. Right at this moment optometric legislation is being rewritten in various states to accomplish this end.

Ophthalmology is only one of many medical fields in danger. I cannot discuss them all.

Now as to my objectives for the ensuing year:

First. I propose to carry on the public relations work begun by my predecessors, but vigorously activated and put into practical operation by Dr. Ruggeri, of bringing together, for frank discussions and constructive criticism, representatives of the medical profession and representatives of various groups, organizations and labor unions, etc., maintaining a high level of friendliness and decorum but pulling no punches in an effort to see each other's problems from the other's vantage point. How different the sunset looks when we elevate ourselves above the immediate obstruction! If we are separated by a chasm we no longer try to pull each other in but join hands in building a bridge.

These meetings have been most enlightening to me and I pay tribute to Dr. Ruggeri's leadership in this field. I believe a fine public relations structure has begun and it is my intention to build upon it.

Second. I propose consideration by the Council and if necessary by the House of Delegates of a one-year period of probation for every new applicant for membership in a County Medical Society. This would not apply to transfers from one County Society to another nor need it in any way restrict the activities of the applicant in his practice during that year. It would, however, give us an opportunity to become better acquainted with the applicant and afford the applicant an opportunity to know his duties and responsibilities to his profession and to society before unqualified acceptance.

Third. I propose consideration by the Council of establishing a course of instruction for beginning doctors embracing such subjects as Medical Economics, Medical Ethics, Medicolegal problems and orientation. I think these subjects are neglected in the curriculi of most medical schools and where they are touched upon it is in the sophomore or junior years and lost to the doctor beginning to need such information. Such a course could be undertaken jointly by the State Medical Society and the Medi-

cal School of the University of Utah and would be open to any physician of Utah desiring to attend. This suggestion has been accepted favorably by the Dean of the Medical School and by doctors old and young who feel as I do that many pitfalls can be avoided by pooling the experiences of the medical, legal, teaching, social and business professions into a practical course of instruction to aid the young doctor in the most critical and difficult years of his career.

Fourth. I propose the creation of a standing "Watch Dog" committee representing each major branch of Medicine and Surgery plus the Executive Secretary and our legal advisors, with power to employ clerical and investigative help if needed. The function of this committee is to keep the Council constantly alerted to any and all efforts on the part of any individuals, groups or organizations to lower the present high standard of medical practice by licensing those unqualified by education, training and experience to practice. Also, to alert the Council on any attempts by restrictive legislation or otherwise to limit qualified physicians in any branch or branches of the healing art or to restrict or limit necessary or desirable services allied or related to our profession, and to perform any other duties imposed upon them by the Council.

Fifth. I propose that appropriate steps be taken to change the meeting date of the House of Delegates to precede the Annual Meeting of the A.M.A. so that our delegate may go instructed by our House of Delegates, and any resolutions we wish to present to the A.M.A. will be current instead of a year old.

I hereby pledge my time and best efforts in justifying your confidence in me.

*Pathogenesis of Atherosclerosis**

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WHEN one sets out to define what is meant by "aging," he will arrive at an enumeration of the various manifestations of a single disease. The familiar foes of the aged—coronary artery disease, peripheral vascular disease, and cerebral atherosclerosis with its attendant strokes and mental regression—are all manifestations of the disease atherosclerosis. It was one of the major advances in medical thinking when such men as Aschoff, Anitschow, Schoenheimer, and others set out to debunk the so-called "aging inevitability" dogma. By defining atherosclerosis as a disease process they made it vulnerable to all the modes of attack by which medical science has made great strides in recent years. It was about twenty years ago that progress was begun in atherosclerosis research. Since then our knowledge has been greatly augmented, and the final answer may not be too remote.

The subject was brought to my special attention during a visit to Costa Rica, where manifestations of atherosclerosis among the aged not only are not an inevitability, but, in fact, a rarity. In a survey of the literature to confirm this observation, this paper was begun. I will present facts regarding atherosclerosis about which there is common agreement and then venture into more speculative realms.

The importance of the disease need not be emphasized. It is the largest single cause of death in the United States, being responsible for nearly half of the total deaths last year. The rapid, recent increase in life expectancy in the United States has been in spite of an increasing mortality rate from atherosclerosis. This increased incidence

*This is a prize paper of The Waring Society presentations at the University of Colorado School of Medicine. This society is an honorary group of junior and senior students whose purpose is to expand their interests and to inspire others to do so.

speaks not only for the increasing age of our population, but also for lack of a definitive answer to the problem of atherosclerosis.

The disease seems to display geographical predilections, and other authors have also noted variations of incidence in other regions of the world. In general, the incidence is proportional to the standard of living. The mortality rates of the United States, Great Britain, and Sweden are the highest, and such peoples as the Chinese, African Negroes, and Costa Ricans are relatively free from the disease. That this difference is not a reflection of race is demonstrated by the fact that incidence among Chinese and Negroes living in the United States is the same as that of the population as a whole. The importance of socio-economic status is emphasized in certain countries such as Malaya where nearly all of the deaths from cardiovascular atherosclerosis occur among the land-owning population, while the natives are relatively unaffected. The variables in all of these situations, which obviously deserve incrimination, are diet and the general nutritional state. Much work as been done to study this relationship and, in general, a close correlation between the quality of nutrition and incidence of cardiovascular disease has been found. The most familiar studies in this regard came out of World War II where it was shown that in countries where diet was relatively unaffected, such as the United States and Sweden, the incidence of atherosclerosis continued to climb, while in severely affected countries, such as Norway, Germany, and Finland, it fell off significantly. Quality as well as quantity has been shown to be of some importance. In general, increased consumption of dairy products and meat is related to higher death rates from cardiovascular disease.

Closely akin to diet is body somatotype in relating to cardiovascular disease. The impression that one gets from the large number of articles on this subject is that the ectomorph has a much reduced incidence from atherosclerosis, while the mesomorph and endomorph bear the brunt of the mortality. In most studies the "fatty" has a slight edge.

The relationship of sex and age to occurrence of atherosclerosis is so interdependent that these subjects should be considered together. The increased susceptibility of the male is a well-recognized fact; however, of extreme interest is the fact that this difference is greatest at the time of menopause—after which time incidence in women increases so that at seventy it is equal to that in man. The incidence in women is actually greater after that time. The implications of this finding have precipitated important research, the findings of which will follow.

Heredity has proved to be of importance as it relates to certain diseases which have an increased incidence of atherosclerosis. It has also been associated with an increased incidence of "essential" atherosclerosis in certain studies, but this question is in need of further investigation. Finally, the increased incidence of atherosclerosis in certain disease states is well established. Among these the most important are diabetes, nephrosis, hypothyroidism, hyperadreno-corticism, hypertension, and familial xanthomatosis. From studies of atherosclerosis in these various disease states has come much salubrious food for thought. Hypercholesterolemia is one answer to the obvious question, "What do these different pathologic entities have in common?"

Evidence for possible importance of cholesterol in pathogenesis of atherosclerosis has existed ever since Vogel identified cholesterol in atherosclerotic plagues in 1854. Since then, histopathololgic studies have not added greatly to our knowledge about cholesterol or its state of aggregation.

Numerous studies in recent years have been directed toward showing a relationship between the level of serum cholesterol and atherogenesis. They have been successful in showing a general statistical coincidence in a large number of cases, but have been unsuccessful in explaining individual variations and the large overlap between the range of normal and variations associated with pathology. One of the more impartial studies of cholesterol levels in health and disease was done by Gertler and Garnsey. In two hundred patients they found the range of values for clinically well

patients to be 148-332 mg. per cent and the range for those with diagnosed coronary artery disease to be 167-490 mg. per cent. That the figures demonstrate the importance of cholesterol in the development of atherosclerosis is obvious. It is, however, just as obvious that the absolute level of serum cholesterol alone is not sufficient to explain all the facts. Neither is the range of overlap narrow enough to make hypercholesterolemia, per se, of value in predicting development of cardiovascular disease in individual cases. There are certain other inconsistencies which tend to detract from the importance of hypercholesterolemia as a pathogenic factor. In a group of atherosclerotics, Gubner and Ungerleider found that seven per cent actually fell well *below* the accepted normal cholesterol levels.

These authors agreed that other mechanisms must be of importance to explain these cases. One of the most promising observations in this respect was made by Ahrens and Kunkel in their study of the importance of hypercholesterolemia in various disease states. They observed that all diseases associated with high blood levels of cholesterol had an attendant high incidence of cardiovascular disease with one notable exception — that being chronic biliary obstruction. In their endeavor to discover what was unique about the cholesterol in this disease, they found that the ratio of cholesterol to phospholipid (C/P) was not changed because of a rise in phospholipids proportional to the rise in cholesterol. They found the C/P ratio to be uniformly and significantly elevated in all the other diseases associated with hypercholesterolemia. Experimental effort to evaluate the importance of this will be discussed later. The universality of interest in the importance of cholesterol in disease renders obvious the necessity of learning as much as possible about its normal metabolism. I would like to summarize some of the recent findings in this regard.

One presumes from the fact that cholesterol is found in all cells of the body that it is a fundamental participant in cellular metabolic or transport systems. Of extreme importance is the fact that with the exception of vitamin D, no exogenous source of cholesterol or any type of sterol is essential. Endogenous cholesterol synthesis is classically thought of as occurring in the liver. However, it has been shown that all cells in the body, with the exception of brain and nerve cells, are capable of producing cholesterol. The elevation of serum cholesterol in liver disease would suggest that the liver was of relatively greater importance in cholesterol excretion than in its synthesis. Schoenheim has done deuterium feeding studies that show the most efficient precursor of cholesterol to be acetic acid. A longer time is required for higher class lipids to be synthesized into cholesterol, thus suggesting that they must first be degraded to acetic acid. Further evidence for the unimportance of longer chain fatty acids in cholesterol synthesis is the demonstration that C_{14} content of plasma cholesterol can be increased without an increase in C_{14} fatty acids. Cholesterol has been shown to be a precursor of cholic acid, adrenocortical hormones, androgens, and estrogen and esterified cholesterol. The rate of turnover of cholesterol has been studied by tracer methods. Maximum activity is reached in one to two days with 15 to 25 per cent of the administered cholesterol in plasma; 25 to 60 per cent of activity was regained in feces in fourteen days. There has been no difference demonstrated in the rate of turnover in normal and hypercholesterolemic patients. However, the series studied was small.

Cholesterol is largely excreted in the feces as coprosterol. Intestinal bacteria are known to be important in catabolism. A large per cent of the cholesterol excreted in the bile is reconstituted following absorption. Certain materials—plant sterols, bacterial inhibiters, and aluminum hydroxide gels—are known to interfere with this absorption as well as with the absorption of ingested sterols. Their therapeutic possibilities are being investigated. The rate of cholesterol excretion in feces seems to be a fairly absolute value and is unaffected by alterations in blood cholesterol levels.

Some of the inconsistencies in trying to relate absolute blood levels of cholesterol to atherogenesis have been pointed out. Such inconsistencies have directed investigative

interest toward finding out more about the state of aggregation of cholesterol in the plasma and tissues. One would not suspect a hydrophobic water-insoluble compound such as cholesterol to exist as such in the plasma, and, indeed, it does not. The colloidal cholesterol-containing aggregates (micelles) are complex structures with respect to size, configuration, and composition. In addition to cholesterol, they consist of other lipids (phospholipids and fatty acids) and proteins.

The question of "solubility" of cholesterol was one of the first to merit attention as an explanation for atherogenesis in the presence of normal cholesterol levels. It was postulated that the plasma did not become hypercholesterolemic because it was saturated and any additional lipid was precipitated on the vessel walls. It was further suggested that plasma solubility decreased with age, thus increasing atherogenesis. Clinical and experimental evidence has failed to confirm this concept.

In 1941, Hueper demonstrated that intravenous administration of macromolecular colloids such as polyvinyl alcohol and pectin induced atheroma-like lesions in the large vessels of dogs. His observations led him to propound the "anoxemia theory" of atherogenesis. The crux of his idea was that plasma "colloid instability" led to precipitation of a cholesterol film on the vessel wall which interfered with the gaseous-nutritive exchange between the blood and the vessel substance. The resulting tissue injury produced endothelial proliferation and phagocytosis of the cholesterol, thus producing foam cells. He contended that the "colloid instability" could result either from hypercholesterolemia or from the decrease of unidentified agents which enhanced the plasma dispersion of cholesterol. The most clearly set forth and significant part of his work is the part regarding foam-cell formation. This concept has been considered in many variations by many people and is generally thought to have merit. His original "anoxemia" idea has not been favored although it is still one of many ideas about how cholesterol gets into the vessel wall.

The importance of neutral fat hyperlipemia has recently been stressed by Moreton. He pointed out that in normal post-absorptive plasma, lipid aggregates (which he calls chylomicrons) are few in number and small in size. In post-prandial periods, the number and size of these aggregates increase. There is a marked increase in neutral fat with no change in cholesterol or phospholipid. He suggested that this relationship was important in maintaining the stability of the colloidal bonds and that the ". . . sine qua non in atherogenesis was the presence of coarsely suspended colloidal particles larger than those in normal plasma . . ." and composed largely of cholesterol "a substance relatively resistant to the resorptive and removal mechanisms of the arterial intima (macrophages and tissue enzymes) . . ." His theory hinges on the supposition that there is an increase in concentration of cholesterol in the larger molecules in atherogenesis. Other investigators have been unable to confirm this by ultracentrifugation studies.

The possible importance of the ratio of cholesterol to phospholipid in atherogenesis in the plasma has been mentioned. The theory here as stated by Ahrens and Kunkel postulates that an increase in ratio predisposes to atherogenesis because of the decreased solubility of cholesterol in water in the absence of the peptizing action of phospholipid. The correlation of C/P ratios to atherogenesis while more consistent than absolute cholesterol levels still displays certain disturbing variations. In addition, it has been shown that the C/P ratios are normally higher when cholesterol levels are higher. So it would seem necessary to compare the relationship of the incidence of atherosclerosis to C/P levels when the cholesterol values are held constant. When this is done, the evidence for the importance of the C/P elevation is far from convincing.

I have left until last the newest and most promising avenues of investigation regarding the state of cholesterol aggregation. These have been opened up by the relatively modern technics of ultracentrifugation and microfractionation of electrophoretic and chemical methods.

Gofman and his associates at Berkeley have done the most noteworthy research

using ultracentrifugation. They defined the lipoprotein fractions they obtained in term of Svedberg flotation units. Svedberg is a Swede who invented the ultracentrifuge. He defined the unit of migration as being 10^{13} cm/sec. Gofman et al, being interested in molecules of less density than the plasma solution, chose to use a flotation unit rather than a sedimentation unit; hence the S_f designation. They identified four main classes of molecules: (1) Those which migrate with S_f values greater than 75. These are the molecules of smallest dimensions. They found no correlation between molecules of this class and atherosclerosis. (2) The species which migrate with S_f values between 30 and 70. These constitute the major fraction in alimentary lipemia. Certain of these components are cholesterol bearing, but they are thought to be of little or no significance in relation to the problem at hand. (3) A rather discrete class which migrates at rates of from 10 to 20 S_f units. Energetic investigation of this group of molecules by a number of competent researchists has confirmed the fact that they are the most important class in the pathogenesis of atherosclerosis. (4) Lipoproteins which migrate at S_f rates of three to eight. They are known to transport a major fraction of serum cholesterol. Lipoproteins in this class are universally present and though they may vary from individual to individual, their concentration is fairly constant for a given person. They are thought by most to be unrelated to atherosclerosis.

Much work has been done to gain additional information about the S_f 10-20 molecules. They are known to have a molecular weight of about three million. They are about 30 per cent cholesterol by weight, which means that each of these molecules has over 2,000 cholesterol molecules in its constitution. A very sharp demarcation between the molecules bearing cholesterol and those bearing neutral fat is found at the S_f level, the molecules below this level being the major cholesterol bearing compounds.

Using tracer technics, this same group of men (Gofman, Jones, etc.) feel that they have demonstrated the fact that the entire spectrum of S_f classes represents a metabolic chain in the ultimate utilization of lipids and that the components of high S_f 17 classes are continually being transformed in lowers S_f groups. They found that the half-life of the smaller lipoproteins is only a few hours. In addition, they found that in normal sera there is no appreciable concentration of lipoproteins above the S_f 6 class during the fasting state. What they observed as being an abnormal lipid transport pattern had increasing concentrations of higher S_f value lipoproteins. As has been suggested, there is a consistent increase in S_f 10 to 20 units in persons with atherosclerosis. They found a similar defect in persons with diabetes, nephrosis, and the other diseases associated with precocious plaque formation. They were able to answer much of the previous criticism by demonstrating this abnormality in people with evidence of atherosclerosis who had normal absolute serum cholesterol levels. Findings with so much possible importance deserve careful investigation. An extensive study is now in progress under the auspices of the U. S. Public Health Service.

An even newer and perhaps equally promising method for studying the role of lipoproteins in atherogenesis has developed from the technics of microfractionation developed by Cohn, Pearsall, Barr, and others. Biochemical microfractionation technics (Method #10 of Cohn et al) have been successful in separating plasma proteins into four main groups. These are, in essence, Fraction A, albumins and alpha$_1$ liproproteins; Fraction B, gamma globulin; Fraction C, euglobulins and beta$_1$ lipoproteins; and Fraction D, fibrinogen, prothrombin, etc. For the purposes of atherosclerosis research, the facts of importance are that all of the serum cholesterol is contained in fractions A and C—more specifically, in the alpha and beta lipoproteins of those groups.

The presence of an abnormality in the serum lipids of atherosclerotic individuals seems to have been fairly definitely confirmed. However, this alone does not complete the story of atherogenesis. One, in addition, must explain how and why the lipid is deposited within the intimal wall. I have mentioned some of the ideas in passing, but I would now like to approach them systematically.

The fact that pre-war German texts of pathology did not mention cholesterol in their discussion of atherogenesis is a reflection of their reverence for Virchow, who postulated in the antiquity of medical history that the disease was a result of a defect in the vessel wall. His venerable hypothesis held that atherosclerosis was a degenerative change (fatty imbibition and metamorphosis) secondary to inflammatory and necrobiotic processes in the connective tissue cells and ground substance of the intima. The details of his concept are not generally accepted, but the possibility of a defect in ground substance must still be considered.

Observations of the variations in the vasa vasorum have been the basis for some interesting hypotheses. Winternitz noted a previously undescribed intramural intimal circulation which anastomoses with the adventitial vasa. He found that they increased with advancing age, were most numerous in regions of arterial branching and, of greatest importance, were always increased in number in atherosclerosis. He further observed frequent intramural hemorrhages from these vessels and consequently postulated that the disintegration and phagocytosis of the red cells at the site of hemorrhage represented the initiation of atherogenesis. Duguid varied this concept, suggesting that the atherosclerotic lesions resulted from the organization of arterial thrombi within the intramural vessels.

The theory which has gained most general acceptance is the simplest and one of the oldest concepts. Anitschow in 1933 expressed the feeling that in the presence of hypercholesterolemia atherosclerosis could develop without any pre-existent alteration in the vessel wall. He reasoned that vessel walls normally functioned as extracellular filters through which nutritive material passed from the plasma. He felt that increased amounts of cholesterol overloaded the cellular filter with resultant deposition and phagocytosis of cholesterol. With certain modifications, in light of our present knowledge, this theory seems to explain many of the facts.

Hirsch and Weinhouse have recently completed a biochemical analysis which shows that the lipids in the intima of atherosclerotic rabbits has the same composition as the plasma lipids, thus lending credence to the filtration concept.

Wilens set out to test Anitschow's hypothesis by distending normal human arteries with normal human plasma for twenty-four hours at pressures varying from 45-320 mm. Hg. By chemical methods, he was able to demonstrate diffusion of serum through the arterial walls. An amount of cholesterol proportionate to the pressure within the vessels entered the arterial wall and remained where it could be identified within the intima by Sudan III staining.

This experiment was carried one step farther by Evans et al who pulsated normal oxalated blood against normal human aortas and compared the cholesterol deposition with that obtained by pulsating blood from persons who suffered recent myocardial infarcts against normal aortas. They found a significantly greater amount of cholesterol in the vessels which had been exposed to the supposedly atherogenic blood.

The "filtration" theory correlates with certain anatomical and clinical observations. To begin with, the increased incidence of atherosclerosis in hypertension could be nicely explained. The predisposition to atherosclerosis at points of vessel bifurcation could be explained by the increased pressure at these points in proportion to the increase in vessel diameter according to Bernouli's principle. There are some difficulties in the "filtration" concept which await additional knowledge of the physicochemical properties of the lipoprotein molecules and their postulated filter.

The recent clarification of the importance of cholesterol in atherogenesis has precipitated a generalized interest in identifying a factor which will alter serum lipoproteins in a favorable way. There have been three general lines of endeavor to alter abnormal serum cholesterol patterns: (1) by changes in dietary intake, (2) by altering lipid excretion, and (3) by the effect of humerochemical agents on serum lipids. The knowledge which we have regarding the influence of nutrition on the incidence of this disease would suggest that a dietary ap-

proach to the problem would be the logical one.

Atherosclerosis has been successfully and consistently induced in chickens and rabbits by cholesterol feeding, and as one might suspect, dietary variations in cholesterol intake directly influence the rate of atherogenesis. The atherosclerotic lesions can be produced in chickens in a matter of weeks, but it must be pointed out that they are fed diets containing as much as two per cent cholesterol—far more than even the most gourmandish capitalist consumes. Well-controlled experiments have also demonstrated that these experimentally induced lesions are reversible by decreases in dietary cholesterol. The results from human experimentation have not been wholly consistent and, in general, have not been very promising. The decreases in serum cholesterol induced by lipid restriction have been disappointingly small and of significant magnitude only when accompanied by caloric restriction and a loss in weight. The general consensus of opinion is that this is a disease induced by a chronicity of dietary indiscretion over a span of years and cannot be cured by a dietary restriction over a period of months.

Many agents have been given an experimental trial in an effort to effectively lower serum cholesterol levels. Among those which have been tried and found, in the final analysis, uneffective, are the plant sterols, succinyl sulfathiazol, choline, inositol, aluminum hydroxide gel, pancreatic extracts, ACTH, and cortisone. Having disposed of the agents which can most profitably be forgotten, I am left with three agents which as yet have not been proven to be useless. The first, which I have already hinted about, is estrogen. It is not too unreasonable to assume that this is the agent responsible for the marked difference in incidence of atherogenesis in men and women. In addition, it has been shown to protect cholesterol-fed chickens from atherogenesis. In humans, estrogen has been found to increase total serum lipids, to decrease the C/P ration, and to decrease the beta lipoprotein fraction. It has failed to relieve symptoms on a short term clinical trial. Eden has pointed out the unfortunate fact that the chemical group responsible for the favorable effect on lipids is the same group which is responsible for femininization.

Heparin has displayed enough promising characteristics to merit extensive investigation. Its effect in altering serum lipids is dramatic. Molecules of the 30 to 100 S_f classes are essentially wiped out during the first hour after a single injection of heparin. During the next hour there is a significant but less dramatic decrease in the S_f 10-20 classes. It is not necessary to reach the usual anticoagulant blood levels of heparin to produce this effect. The action was found to be due not to heparin, but to a complex protein which liberated heparin on boiling. Here again the trial periods have been over a period of a few weeks to a few months and consequently have not been of significance in evaluating the effect of long term administration.

The most potent serum lipid lowering agent yet identified has been thyroxin. This hormone has long been known to be of value in preventing the atherosclerosis which accompanies myxedema. Whether it is of value in the euthyroid individual predisposed to atherosclerosis is still a subject of controversy. It has been found that thyroid decreases the half-life of exogenous cholesterol by 50 per cent and also increases the biliary excretion of cholesterol while markedly lowering the serum level. Thyroid can be said to have similar effects on any metabolite. However, Stamler et al feel that the effect is more specific in the case of cholesterol because other agents which increase the metabolic rate such as dinitrophenol increase the rate of turnover but do not lower serum cholesterol levels. In experimental animals it has been found that thyroid delays but does not prevent the development of hypercholesterolemia; however, it has also been observed that these animals do not develop atherosclerosis even in the presence of hypercholesterolemia. It has been suggested that they exert their effect by altering the tissue response to cholesterol or by changes in the membrane permeability. The dangers attendant to long term administration of thyroid are well recognized. For this reason there is need for a study to explore the possibilities of

divorcing the metabolic effects of the thyroxin molecule from the atherolytic ones.

An intriguing, but as yet unexplored, possibility is that of the formation of antibodies to the pathogenetic group of lipoproteins. That this may be a possibility has been suggested by the work of Baker and Ogden who have developed a serologic test for the identification of S_f 2 to 30 lipids. A number of variables must be controlled before their work can withstand critical appraisal.

Summary

Having presented what I consider the more significant thoughts about atherosclerosis which have evolved from the past twenty years of research, I will focus your thinking on this subject by summarizing the more important points. It is well to keep in mind the facts which are well known regarding the incidence of atherosclerosis and its relationship to other diseases. This will be of value in routine patient care, and it is a fruitful line of thinking in searching for atherogenetic factors.

The importance of cholesterol in atherosclerosis is well established. Much needs to be known about normal cholesterol metabolism as well as the role it plays in atherogenesis. The most promising work in this regard has been along physico-chemical lines such as the ultracentrifugation studies of Gofman and the microfractionations of Cohn and Russ. The intriguing possibility of immunologic research, being important, deserves re-emphasis.

There is an important task for the pathologist and histologist to tell us more about the characteristics of the vascular wall. The electron microscope has apparently been neglected in this regard. Our thinking can be facilitated by an increased knowledge about characteristics of the proteins with which we are dealing. Herein may lie the key to the entire problem. In general, much work must be done on a basic science level before a successful therapeutic tool can be found. The current interest and research enthusiasm in atherosclerosis suggest that a solution may be achieved during the years of our practice.

Since pneumonia is no longer a serious threat to life, the atherosclerotic diseases have taken over as "friend of the aged." The lingering, debilitating, disintegrating course characterized by atherosclerosis is not nearly so friendly as the relatively dramatic progression which one used to associate with pneumonia. It seems reasonable to predict that the process of aging would be entirely different if atherosclerosis could be prevented.

There are two common concepts of what is meant by aging. The concept associated with the aging of people is that of a chronic, regressive, degenerating process; the other is commonly associated with bonded whiskey and high quality wine and is a progressive process of mellowing, enrichment, and increase in social worth. What a fine prospect to be able to approach increasing age with the latter concept in mind!

A.M.A. OFFERS NEW TV AIDS

Two new television "scripts-with-film" programs featuring current health education information on the eye and its functions will be released this fall by the A.M.A. Prepared with the cooperation of the A.M.A.'s Bureau of Health Education and the National Society for the Prevention of Blindness, these shows are designed so that a local physician can narrate while the film is thrown on the television screen.

The programs are: (1) "A Clear Picture" — which deals with the eye and its functions, includes a clever animated sequence employing a fresh orange, a glass lens and a piece of lipstick to show the structure of the eye; (2) "Wonderful Spectacle" — which describes the functions of glasses and lenses. The programs are so constructed that they can be used as separate 15-minute programs or together as a single 30-minute presentation. The film demonstrator is Dr. Brittain F. Payne of New York City, noted ophthalmologist.

Both films and accompanying scripts will be available after September 15 through the A.M.A. TV Film Library. There is no charge to medical societies.

AC

(you probably know every answer!)

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Deaths of Unborn Infants in Colorado*

JOHN A. LIGHTY, M.D.,
AND PAUL D. BRUNS, M.D.
Denver, Colorado

IN 1953 the problem of the death of any unborn baby in Colorado was recognized by the adoption of a Certificate of Fetal Death. This certificate was developed by the Colorado State Health Department and the University of Colorado Medical School, with assistance from the health departments of New York and New York State and the National Office of Vital Statistics. (New York City has required the reporting of all fetal deaths, regardless of the age of gestation, since 1939.)

Colorado's fetal death certificate was designed to permit the practicing physician, pathologist or hospital administrator to give the maximum of medical information regarding the circumstances of a fetal death with a minimum of inconvenience. The Colorado State Medical Society approved the use of this new certificate for reporting all fetal deaths and on January 1, 1954, it officially replaced the Stillbirth Certificate in Colorado. Other states are considering similar measures, but Colorado was one of the first to introduce the use of such a certificate.

In order to give the members of the medical profession the important information obtained from the use of this new certificate, a special grant was made available by the Continuing Research Committee of the University of Colorado Medical School to code, analyze and make a report of the data obtained from the first year's experience.

For clarity and uniformity the World Health Organization in 1950 adopted the following definitions of live birth and fetal death:

LIVE BIRTH—Live birth is the complete explusion or extraction from its mother of a product of conception, irrespective of the duration of pregnancy, which, after such separation, breathes or shows any other evidence of life such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached; each product of such a birth is considered liveborn.

FETAL DEATH—Fetal death is death prior to the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of pregnancy; the death is indicated by the fact that after such separation the fetus does not breathe or show any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles.

Since, by definition, the death of a fetus and a live birth are mutually exclusive, it is obviously unnecessary to use a Certificate of Live Birth in the case of any infant born dead.

Colorado physicians and hospitals have been most cooperative in the use of this new Certificate of Fetal Death, as indicated by the reports filed with the Records and Statistics Section of the Colorado State Health Department for the year 1954. A total of 1,897 such certificates was received, and this represents from three to four times as many reports as were received for any of the five previous years when the Stillbirth Certificate was in use. Of course much of this increased reporting is due to removal of the restriction of reporting only fetal deaths of gestational age of 20 weeks or greater. Analysis of gestational age of the fetal deaths reported in Colorado for 1954 (see Table 1) shows that two-thirds of the fetuses represented were of less than twenty weeks' gestation and 50 per cent were less than sixteen weeks. This serves to emphasize

*From the Colorado State Department of Public Health and the Departments of Pediatrics and Obstetrics & Gynecology of the University of Colorado Medical School.

the value of reporting all fetal deaths.

TABLE 1
Fetal Deaths By Gestational Age
Colorado 1954

Week of Age	No. Reported Deaths	Per Cent
Less than 16	996	57.0
16 to 20	165	9.5
Greater than 20	586	33.5

As soon as all fetal deaths are made reportable, information can be obtained regarding the size of this medical problem in a given community. A few comparisons of the number of fetal deaths with deaths occuring during the first four weeks of life (Neonatal Deaths) are shown in Table 2.

TABLE 2
Approximate Ratio of Reported Fetal Deaths to Reported Neonatal Deaths

Place	Ratio	Comments
New York City '49	3:1	Includes death to 1 year of age
Columbia Univ.	3.8:1	Special research study
Colorado '54	2.1:1	Routine reporting

The New York City[1] ratio would be slightly increased if deaths of infants between age four weeks and one year had been excluded. Furthermore a special study[2] conducted at this same time in New York City revealed that the routine reporting of fetal deaths was only about 50 per cent complete. The Columbia University study[3] was very carefully conducted, by a team of professional personnel, on some 6,000 pregnancies followed closely from the fourth month of gestation. Hence the ratio of fetal to neonatal deaths (3.8:1) is probably quite accurate. If one assumes for the first year's experience in Colorado the same degree of under-reporting as was found in New York City, the corrected Colorado ratio would be 4.2:1, a value which would be in close agreement with that for the Columbia study. Another way of expressing size of the fetal death problem is by comparing it to the number of live births. Using this method one finds that there were 49 reported fetal deaths per thousand reported live births in Colorado for 1954. During the same period there were 21.4 reported neonatal deaths per thousand live births. Certainly the problem of deaths of unborn babies is much larger than that of newborn deaths.

Another most important question in the total medical appraisal of any pregnancy which does not result in a live birth is the outcome of previous pregnancies for the particular mother. Study of the fetal death certificate data shows that 576 (about one-third) of the mothers had at least one similar tragedy previously. The mother who has had repeated experiences of this nature is most apt to benefit from careful management of future pregnancies.

Some of the more commonly reported complications of pregnancy for this group of fetal deaths are shown in Table 3.

TABLE 3
Fetal Deaths By Complication of Pregnancy

Complication	No. Reported	Comments
Unknown	1052	Nothing stated for an additional 387
Uterine bleeding	183	
Total toxemias	70	Includes all grades of eclampsia, hypertension and nephritis
Rh Neg. (sensitized)	41	
Uro-gen. infection	18	
Diabetes	9	
TBc	7	
Syphilis	2	

Apparently no complication of pregnancy could be found in over half of the fetal deaths. Uterine bleeding was the highest ranking cause and probably represented aberrations of placentation. The forty-one reported fetal deaths associated with Rh sensitization serve to remind physicians that the unsolved problem of erythroblastosis is represented by death in utero. Preventive measures for this complication are sadly lacking. The threat of tuberculosis and syphilis seems to be insignificant. Undoubtedly these complications of pregnancy have been decreasing over the past twenty-five years while the problem of maternal diabetes is increasing as more juvenile diabetics reach the child-bearing age.

It was impossible to make any correlation between the type of analgesia or an-

esthesia and fetal death. These two factors were analyzed separately and in each case the statement "none given" was recorded in over half of the reports. This suggests that Colorado physicians are well aware of the possible effect on the fetus of maternal analgesia or anesthesia.

Regarding the various causes of death of these fetuses, the authors are in agreement with Kohl's conclusions from a similar study[4] to the effect that "no confident statements may be made" because of the small number of autopsies and the large number of "unknown" causes. A pathological examination was obtained for about half (877) of these fetal deaths, but the statement "no findings" was given for 718 of them. This suggests that the fetal death certificates were too often filled before complete information could be obtained from the pathologist. The Colorado State Health Department is presently developing a plan to encourage the reporting of an amended statement of cause of death. This should prove applicable to all types of death reports and may encourage greater use of autopsies. The importance of having accurate statements for cause of death has been mentioned by other health departments[5]. The falure to state whether or not there was a pathological examination occurred in 659 certificates. This can only represent carelessness in supplying the information requested for the fetal death certificate.

The number of congenital malformations reported for this series of fetal deaths was seventy-six. This incidence of 4 per cent is about one-fourth that found in the fetal deaths of the Columbia University study. It probably means that considerable underreporting occurred for this category. Because of the increasing interest in, and the importance of, congenital defects as a cause of neonatal deaths, physicians and pathologists are urged to be more careful in recognizing and reporting all congenital malformations on birth and death certificates. The unusually high incidence of defects of the central nervous system as compared with that for the cardiovascular, gastrointestinal and genitourinary systems in this report (see Table 4) is not in agreement with the findings of the Columbia study.

TABLE 4
Number of Congenital Defects By Organ System

Organ System	No.
Central Nervous	43
Musculoskeletal	9
Cardiovascular	2
Gastrointestinal	2
Genitourinary	1
Multiple Systems	16

Discussion

On the basis of this first year's experience, it seems quite clear that the adoption of a Certificate of Fetal Death for reporting all deaths of unborn infants in Colorado, regardless of age of gestation, has supplied important medical information which may assist alert physicians in saving the lives of more unborn babies. Modifications of the details of this certificate will be indicated from time to time,* but the real value of fetal death reporting will depend on the accuracy and completeness with which physicians, pathologists and hospital administrators use the new certificate. The state health department in turn will have the responsibility of carefully tabulating and analyzing the data supplied so that it can furnish physicians with periodic reports similar to this present one. It can be anticipated that this type of cooperation between physicians and health departments will not only result in a reduction of "pregnancy wastage," but will also help to reduce Colorado's high neonatal death rate.

Summary†

1. The Colorado State Health Department has received 1,897 reports of fetal deaths for 1954, which is at least a threefold increase over the old Stillbirth reporting. This information has been analyzed and is reported.

2. About two-thirds of the fetal death reports filed for this year were found to represent pregnancies of less than 20 weeks gestation.

3. On the basis of this experience the size

*In cooperation with the Colorado State Medical Society, steps have already been taken to simplify the form for reporting fetal deaths of less than 20 weeks gestation.

†The authors wish to express their sincere appreciation of the invaluable assistance given by Dr. Fred W. Beesley and his associates in the Records and Statistics Section of the Colorado State Department of Public Health.

of the fetal death problem (deaths of unborn infants) appears to be over twice that of newborn deaths.

4. Valuable information concerning associated complications of pregnancy, including previous pregnancies, was obtained from this study. The three complications most frequently reported were: Uterine Bleeding, Toxemias of Pregnancy and Rh Sensitization.

5. For the first year there was obvious insufficient reporting of pathological examination regarding the cause of fetal deaths.

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Problems of Pain Relief and Anesthesia in Disaster Areas*

HARVEY C. SLOCUM, Colonel, MC, USA,
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DISASTER, depending upon cause and effect, can produce quantitative variables in relation to the number of casualties. The frenzies of nature may involve many lives, but of equal importance is the significance of disaster in which a child is injured at play. Nature-born disasters arise from the results of tornados, hurricanes, floods, fires, earthquakes, and tidal waves. Man-made disasters arise from industrial and transportation accidents as well as from the weapons of war.

The relief of pain and the need for surgical care may be uppermost in the thoughts of those survivors who are still capable of functioning. Actually, however, much must be done in the way of organization before any patient can receive definitive care. Casualties must be surveyed in order to mobilize the uninjured, to separate the living from the dead, and to salvage the wounded. The severity of injury indicates the type of care necessary as well as the need for hospitalization. When casualties occur in great numbers, the moribund patient admittedly needs hospitalization, but only those who will survive can be included in the actual mobilization for patient care.

The effects of injuries and the significance of the damage should and must be evaluated in relation to cause. In this way, those who are not hopelessly injured and may be saved can be designated. The causes of injury to be considered are blast, burns, skeletal trauma, radiation, asphyxia, electrocution, and submersion. The ever important aspects of fear and panic must be taken into consideration in relation to seriousness of injury. The differential care for a patient is based on the urgency necessary to save his life. Experiences in disaster areas have shown that the tourniquet, pressure dressing, needle, and a supply of plasma volume expander used for primary emergency care are without equal. With these four items, hemorrhage can be controlled in many cases. Sucking wounds of the chest can be isolated, tension pneumothorax can be relieved, and the initial treatment for shock can be instituted. Included among the life-saving procedures are the relief of respira-

*Anesthesia and Operative Service, Walter Reed Army Hospital Medical Center, Washington 12, D. C. Read before the Rocky Mountain Medical Conference, May 4, 5, 6, 1955, Albuquerque, New Mexico.

tory obstruction caused by a relaxed tongue, emesis, or foreign bodies. Although special attention must be given to the patient with evisceration, increased intracranial pressure, and cardiac tamponade, this cannot be done at a first aid level. Saving the life of a patient, at the risk of sacrificing tissue or function, is of primary importance. It does no good to conisder the secondary effects of trauma only to sacrific the life. Resuscitation of vital functions by adequate treatment of shock and acute circulatory depression must necessarily precede any type of emergency surgery. Emergency surgery should be delayed until the patient's vital compensatory mechanisms are restored and only primary surgery of limited scope should be attempted.

As hospital facilities are set up on the periphery of any disaster area, organized planning must be considered for proper as well as adequate usage of these facilities. Logically, all patients should be held in one or more collecting areas where a physician's only duty would be to survey and classify injuries. At these points, patients would be grouped in relation to urgency and type of care needed. Only first aid facilities rendered by non-professional people would be available. As various hospital areas are set up, they would in turn receive patients according to their physical and professional capacities. Many disasters occur without warning, and adequate hospital facilities are not always immediately available. Because of this, the survival of the injured must necessarily be maintained at the highest possible level by means of minimal therapy. Experiences in one MASH unit in Korea have shown that the death rate in approximately 86 per cent of all casualties could be held to a reasonable minimum and that survival was due to the earliest possible emergency care. In this group, emergency surgical proceedings were performed only after adequate resuscitation. It was also noted that in the wounded who were moribund from thoraco-abdominal injuries, the death rate was almost 50 per cent, in spite of every available facility including blood, plasma, surgical care, and the best of highly skilled professional personnel.

An important part of resuscitation is the relief of pain. In some instances, circulatory depression, aggravated by pain, is capable of advancing the patient into a state of shock. In contrast, the patient in a state of shock has minimal pain and therefore needs no pain relieving drugs. The limitations on the use of opiates have been described time and again. Primarily, they should be withheld from the ambulatory patients who would, when depressed, become liter cases or who might become disoriented and wander off into a hazardous zone. The hysterical patient should receive a small intravenous dose of some barbiturate. The seriously injured patient in the non-transportable group should have no opiates. For examples, head injuries would be complicated by depression of the respiratory center and increased intracranial pressure; maxillo-facial injuries, being difficult problems in relation to maintenance of an adequate airway, would be further complicated by respiratory depression unless a tracheotomy was done immediately. Open chest injuries with inadequate respiratory ventilation would have the added complications of depression of the respiratory and circulatory mechanisms. Morphine should be given only when acute pain exists, such as that which occurs with joint injury, trauma to the paravertebral sympathetic nerves, or traumatic amputations involving the sciatic nerve near the hip, and then only by the intravenous route. In extensive first and second degree burns a single dose of opiate may be indicated, whereas deep burns usually require none. In a high percentage of patients, a single dose of opiate may give adequate relief. Wherever possible, it is advisable to withhold the use of opiates. As the injured are brought into the hospital for emergency surgery, adequate analgesia or anesthesia must be provided. Since the majority of the people in the medical profession would be used in hospital units rather than in the field, patient care in each unit would be highly efficient. Many of the safety factors in the management of the critically injured depend upon an adequate re-evaluation of the patient as he is being prepared for an operation. The vital signs are taken into consideration as well as previous therapy in the field, including blood

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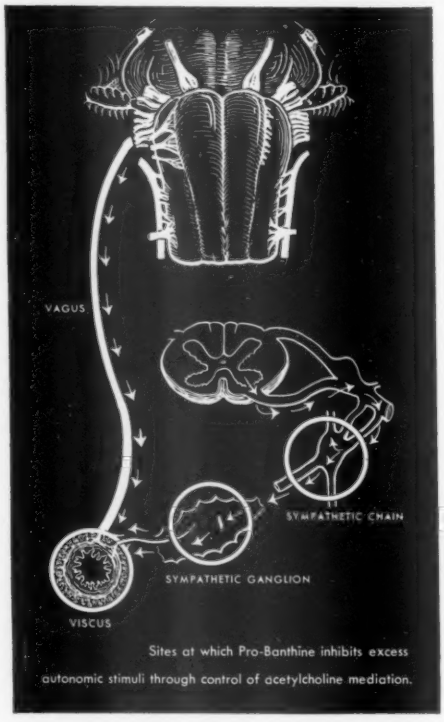

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replacement, medications, and other life-saving therapy. At this time, it is extremely important for the surgeon and anesthesiologist to determine whether or not the patient's physiologic compensatory balance has been restored to a point where the effects of anesthetic drugs and surgical intervention can be tolerated.

Lessons learned and re-learned in numerous wars and disasters confirm the fact that only by extremely delicate handling, with minimal amounts of anesthetic drugs of any kind, can the seriously injured patient be expected to survive. For example, a wounded soldier who has had his vasomotor mechanism "blown out" of him may be in even more of a critical balance than an octogenarian whose compensatory mechanisms have been ravished by the factors of time. It is found that dilute solutions of pentothal, one per cent or less, in small doses may have a profoundly depressing effect on the wounded patient. The same amount would scarcely cause a healthy adult to become sleepy. Likewise, a 50 to 60 per cent nitrous oxid-oxygen mixture will produce satisfactory analgesia and, in some instances, anesthesia, in the seriously injured. Low concentrations of ether and other such drugs become potently effective. In many casualties, the psychogenic factors of trauma may produce an intense alertness which is misleading. In some instances, considerable amounts of gas or intravenous agents are required to overcome the psychic factors and cause the patient to lose consciousness. If this induction phase is not handled very carefully or cautiously, the primary and immediate effect on the patient, after loss of consciousness, is an acute circulatory depression and sometimes shock. The surgeon and anesthesiologist, working as a team, must always be ready to discontinue a surgical procedure to permit further resuscitative procedures, such as elimination of anesthetic agents, administration of a high concentration of oxygen, further administration of blood, and re-establishment of an adequate airway. It should be stressed that the type of anesthetic agent, volatile or non-volatile, is of secondary consideration in relation to the actual administration of these drugs in extremely small amounts. It is further stressed, that, under the effects of analgesia alone, extensive operative procedures may be accomplished which would be out of the question under normal circumstances.

Local anesthetic drugs can be widely used, particularly for debridement and care of superficial wounds. Again, experience indicates that the percentage concentration of the anesthetic drug which one is accustomed to using will work effectively and with a far greater degree of safety if cut in half. The use of muscle relaxants is an invaluable adjunct which avoids the sympatholytic effects of deep surgical anesthesia. The use of curare or succinycholine in subnormal doses will facilitate endotracheal intubation for a neurosurgical, thoracic, or abdominal procedure. In most instances, the usual amounts required to relax skeletal muscle are not needed, and, if used, may cause an acute circulatory depression, particularly if associated with poor ventilation. Premedication, except for average doses of the belladona derivatives, is usually contraindicated. Some of the newer drugs which depress the autonomic nervous system produce a peripheral vasodilatation and hypotension. Clinical adaptation of the use of these drugs has been extremely limited in cases of shock and in the treatment of surgical casualties. It is hoped that by controlled experimental work further light will be shed on the use of these drugs.

In future planning, our methods for handling surgical casualties must necessarily be controlled by our present thinking, which must always be geared to a consideration of multiple rather than single casualties.

A chronic diesease or condition may be defined as one which lasts a long time or at least too long and which, while it is present, prevents the individual from operating at his optimum efficiency. The cause may be a disease, as in the case of poliomyelitis, tuberculosis or syphilis of the central nervous system. It may be a physical or mental injury or dysfunction as in the case of cerebral palsy, an accidental amputation, mental retardation, or excessive exposure to radiation.—Daniel Bergsma, M.D., New Jersey Pub. Health News, April, 1955.

The Washington Scene

A monthly news summary from the nation's capital by the Washington Office of the A.M.A.

Although Salk vaccine now is coming from the laboratories in encouraging volume in Washing there still are unresolved questions that may well go beyond the problem of controlling poliomyelitis.

After months of wrangling, Congress this year enacted only one law dealing with the new vaccine. This was an authorization for the allocation of money to states to help finance inoculation campaigns. On this there was a sharp difference of opinion. Some lawmakers wanted to give federal money, but to earmark it for the exclusive use of children who had passed the "means test," that is, whose parents had been officially determined to be unable to pay for the shots. Others would have nothing to do with a bill carrying the "means test."

As finally enacted, the law provides enough money to buy vaccine for only approximately one-third of all children under 20 and pregnant women. That is a concession to those who want a "means test." But the "no-means test" faction was appeased by another provision of the law, a stipulation that in inoculation programs arranged by the state and communities no financial questions could be asked.

It may be that this decision will be final, that Congress will have nothing more to do with this complicated problem, except possibly to add to the 30 million dollars already appropriated to pay for vaccine. But that isn't the way some members of Congress feel. They want to reopen the entire question before the present law expires next February 15. At the very least, these Senators and Representatives want Congress to vote enough money to buy shots for all children in the eligible ages. In fact, those who want the federal government to play a larger role in inoculation programs regard the law now on the books as merely a temporary measure. They are looking forward to reopening the issue.

If this is done, the many questions that the last session couldn't decide again will be before Congress. Here are some of them:

1. Is it the responsibility of the federal government to make free shots available to all, regardless of ability to pay?

2. If there is to be a "means test," should the states or the federal government set the dividing line between the families that can pay and those that can't?

3. Should the federal government move into the picture and allocate the available vaccine, or should distribution continue along the present voluntary lines?

4. Should the states and communities arrange for all inoculations themselves?

Underlying these questions are some issues that go beyond Salk vaccine. Some persons in Congress believe there should be no limit to the participation of the federal government in public health programs. They would like to see free inoculations not only for poliomyelitis but also for all other communicable diseases for which there is specific vaccine.

Also, the rambling system of federal control over drugs, with enforcement spread among half a dozen departments and agencies, is under criticism. Some leaders in Congress believe the whole area of federal drug control should be surveyed, and possibly more clear-cut lines of enforcement laid down. One bill on this subject—which was not pressed last session—would give the Secretary of the Department of Health, Education, and Welfare authority to move in and assume control over the distribution and even the use of any drug when the Secretary decided that the public welfare warranted such drastic action.

Notes:

During the current fiscal year the U. S. will be spending a total of over 32 million dollars to help in vocational rehabilitation work, most of it in the form of grants to states.

In exchange for patent rights, colleges and laboratories will receive some financial concessions from the Atomic Energy Commission in purchase of nuclear materials and equipment.

From now on Air Force physicians, when addressed verbally, will be called "doctor." The military rank and title will continue to be used, however, in written communications.

The Department of HEW's many medical research programs are being scrutinized by a special committee set up by the National Science Foundation. In originally suggesting the study, former HEW Secretary Hobby said the time had come to re-evaluate the extent of federal medical research. Final findings will be turned over to HEW Secretary Marion B. Folsom.

Highlights of the Annual Session

It had been a year of progress . . . all auspices pointed to an even better year ahead . . . budget in balance and $8,000 in the black for the year just closing . . . committees uniformly active and harmonious . . . medical school problems, labor relations problems, legislative problems, not all solved but distinct progress made and stage set for more . . . remarkable attendance . . . outstanding program and entertainment . . . 50-year-practice members honored . . . by-laws streamlined . . . Councilor Districts revised and improved . . . . . .

Those might be the "headlines," but before giving other details, everyone who has not already heard is naturally interested in who was elected to office.

Dr. George Raymond Buck of Denver is the new President-elect. He is about to have his fifty-first birthday (born October 30, 1904).

George Buck is a native of Goodland, Kansas, but moved with his parents to Denver at an early age. He attended grade schools and West High School in Denver, and obtained his B.A. degree from the University of Colorado in 1927. His M.D. was also from the University of Colorado, in 1931, and was followed by an internship at St. Luke's Hospital, Denver.

Dr. Buck began his professional career in Denver as a general practitioner, and for a time was surgeon to the Denver Police Department. Later he limited his work to general surgery. Then, as a Lieutenant Commander in the Navy Reserve, he was called to active duty in World War II and served with distinction in the Pacific, mostly on sea duty, though toward the end of the war he was transferred back to Colorado as senior medical officer in the V-12 program at the University of Colorado's Boulder campus and later was promoted to full Commander. His war service interrupted a term as a member of the Colorado State Board of Medical Examiners, to which he was first appointed in 1941. He was reappointed to the same Board in 1949 and served as its President from 1953 until his term expired last spring. Last year, the Federation of State Medical Boards of the United States appointed Dr. Buck chairman of its new Committee on Model Uniform Medical Practice Act, and as such he still heads the national group seeking more uniformity in medical licensing laws throughout the country.

Dr. Buck had already been active in committee work and as an officer of the State Medical Society. He served several years on the Public Policy Committee and was its chairman for the 1947-48 year. In 1948 he was elected Constitutional Secretary and served three years in that position, which made him an ex-officio member of the Society's Board of Trustees and again of its Public Policy Committee. Following postgraduate work which was interspersed with his practice and his official duties, he gave up general surgery and has limited his practice to proctology the last seven years. He will assume the Presidency of the State Society at its 1956 Annual Session—next September in Estes Park.

Other Elections

At last month's session, Dr. Samuel P. Newman of Denver retired from the Presidency, and was succeeded by Dr. Robert T. Porter of Greeley. Dr. Leo W. Lloyd of Durango, retiring after six years' membership on the Board of Councilors, was elected Vice President. Dr. Thomas K. Mahan of Grand Junction was re-elected for another three-year term on the Board of Trustees, and Dr. Terry J. Gromer of Denver was elected to a similar term, succeeding Dr. William R. Lipscomb of Denver. Trustees Drs. C. Walter Metz of Denver and L. D. Buchanan of Wray hold over, as do Constitutional Secretary James M. Perkins of Denver and Treasurer William C. Service of Colorado Springs.

Dr. Everett H. Munro of Grand Junction was elected Delegate to the A.M.A. for a two-year term beginning next January 1, succeeding Dr. George A. Unfug of Pueblo. The new Alternate-Delegate is Dr. Harlan E. McClure of Lamar, succeeding Dr. Munro. Delegate Kenneth C. Sawyer and his alternate, Dr. I. E. Hendryson, both of Denver, have another year of their terms to serve.

Dr. Harvey M. Tupper of Grand Junction was re-elected to another three-year term on the Board of Councilors. Also elected to three-year terms as Councilors were Drs. Charles L. Mason of Durango, succeeding Dr. Lloyd, and Harry C. Bryan of Colorado Springs, serving a new district as noted later in this article. Elected for a one-year term to serve another new Councilor district was Dr. Roger G. Howlett of Golden.

Dr. William B. Condon of Denver, who had been Vice Speaker of the House of Delegates, was elected Speaker, succeeding Dr. John Weaver of Greeley, and the House chose Dr. Carl W. Swartz of Pueblo as the new Vice Speaker.

Dr. Walter W. King of Denver was re-elected for another year as Foundation Advocate, in charge of developing the Colorado Medical Foundation.

Six members of the Board of Supervisors were elected, each for two years. They are Drs. Lawrence W. Holden of Boulder, Robert C. Lewis, Jr., of Aspen, Kenneth H. Beebe of Sterling, James S. Orr of Fruita, Duane F. Hartshorn of Fort Collins, and William N. Baker of Pueblo.

Under the revised By-Laws, President Porter will serve automatically as Chairman of the Board of Trustees this year, and Vice President Lloyd will serve as Vice Chairman of the Board. The Board of Councilors elected Dr. Herman Roth of Monte Vista as its 1955-56 Chairman, and Dr. John Gillaspie of Boulder as its Vice Chairman. The Executive Secretary of the Society is Secretary to both Boards.

New Membership Rules

Additional amendments to the By-Laws, with Constitutional Amendments proposed a year ago and adopted this year, made permanent the temporary arrangements for according full active membership privileges to Emeritus Members of the Society. Also, an amendment now accords life-time Active Emeritus Membership automatically to any member who reaches his 70th birthday if he has been a member of the Society for twenty years, and does the same if he has been a member forty years regardless of his age. Formerly, such membership required retirement from practice. Full retirement, disability, or other pertinent circumstances can also grant Active Emeritus membership if approved by the Board of Councilors on an individual basis, and it accrues on an annual rather than a life basis to members who are called to military service.

Another important amendment adopted was one establishing two-year terms instead of the former one year for membership on all Standing Committees of the Society, so that only half the membership of a Committee will go out of office each year.

One of the major debates in the House of Delegates concerned the Society's relationships with the University of Colorado School of Medicine and its teaching hospitals, particularly with regard to proposals of the full-time faculty of the School for admission of private-practice patients to those hospitals or to possible new hospital wings. Acting upon a proposal stemming from joint meetings of the Society's Board of Trustees and the University's Board of Regents, the House approved a policy of according private practice privileges to members of the full-time faculty, with the understanding that this does not commit the Society to approval of admission of such patients to, or performance of such private practice within, Colorado General Hospital or construction of a special wing of the hospital for private practice purposes. Instead, the House approved creation of a top-level joint committee of the Regents and Trustees to study the whole matter further and endeavor to agree upon a method for implementing private practice privileges for the full-time faculty.

Considerable discussion also attended the problem of relationships of Society members with the United Mine Workers' Welfare and Retirement Fund, particularly in the Trinidad area. The Society's recently re-created Advisory Committee to this Fund was reported to have made real progress toward solution of the problems. The Committee's name was changed, at its own suggestion, to "Liaison" instead of "Advisory," and work done by that committee and by the Board of Councilors was expected to provide definitive decisions toward solution of the coal-mine-area problems within the next few weeks.

Registration Hits 1,525

Total registration at the Annual Session failed to break the all-time record established in 1949, at the time full-color closed-circuit television was first included in the scientific program and attracted tremendous attendance for its novelty as well as its scientific teaching value. However, the total registration this year of 1,525, including 990 M.D. members of the Society, far surpassed every previous meeting except the notable 1949. The 990 total of M.D.'s amounts to well over half the total Active Membership of the State Society, and is a record of which any State Medical Society may be proud. Scientific highlights of this year's general meeting program was the closed-circuit teleclinic each morning, presented through the courtesy of Wyeth Laboratories. The "S.R.O. sign" had to be figuratively hung out for almost every session in the Shirley-Savoy Hotel's big Lincoln Room.

The banquet, too, included as did the stag smoker two nights before, the best in food and entertainment, and both attracted attendance far above the average.

Delegates Revise Councilor Districts

By amending its Standing Rule fixing the boundary lines of the nine Councilor Districts of the State Society, the House of Delegates brought about a complete revision of these districts. The revision had been worked out in advance by the House's Committee on Constitution, By-Laws and Credentials, chairmanned by Dr. John L. McDonald of Colorado Springs.

Colorado's combination of geography and population distribution prevents a Councilor district system that would permit nine individual Councilors each representing one or more component medical societies to do so and still have a Board fully representative of population density as well as geography. However, the revision is believed to improve the former plan under which two districts had less than thirty members per district while one, representing the entire Denver metropolitan area, represented about 1,100.

The new House of Delegates Standing Rule

reads: "The Councilor Districts shall be arranged as follows:

"No. 1. Denver Medical Society (currently including Denver and Adams Counties; provided, that should the physicians of Adams County organize separately and detach themselves from the Denver Medical Society, Adams County shall be transferred to District No. 2).

"No. 2. Arapahoe County Medical Society and Clear Creek Valley Medical Society. (Arapahoe, Douglas, Elbert, Clear Creek, Jefferson and Gilpin Counties).

"No. 3. El Paso County Medical Society (El Paso and Teller Counties).

"No. 4. Eastern Colorado, Morgan County, Northeast Colorado, and Washington-Yuma Medical Societies (Morgan, Lincoln, Cheyenne, Kit Carson, Logan, Sedgwick, Phillips, Washington and Yuma Counties).

"No. 5. Boulder, Larimer, and Weld County Medical Societies (Boulder, Larimer and Weld Counties).

"No. 6. Garfield County, Mesa County, and Northwestern Colorado Medical Societies (Garfield, Eagle, Pitkin, Rio Blanco, Mesa, Grand, Jackson, Moffat and Routt Counties).

"No. 7. Delta County, Montrose County, and San Juan Basin Medical Societies (Delta, Montrose, Ouray, San Miguel, Archuleta, Dolores, La Plata, Montezuma and San Juan Counties).

"No. 8. Chaffee County, Lake County and San Luis Valley Medical Societies (Chaffee, Park, Gunnison, Hinsdale, Lake, Summit, Alamosa, Conejos, Costilla, Mineral, Rio Grande and Saguache Counties).

"No. 9. Fremont County, Huerfano County, Las Animas County, Otero County, Prowers County and Pueblo County Medical Societies (Fremont, Custer, Huerfano, Las Animas, Otero, Crowley, Bent, Prowers, Kiowa, Baca, and Pueblo Counties)."

Dr. Madler Accepts for
The "Fifty-Year Club"

Forty of the Society's one hundred fourteen living members who have completed fifty years or more of practice since graduating in medicine were personally awarded the Society's new "50-year club" gold pins at the Annual Banquet Thursday evening, September 22. Pins will be forwarded to those who could not attend in person, probably before this issue of the Journal reaches them.

Dr. Samuel P. Newman, President, assisted by members of the Society's Board of Trustees, personally awarded the pins. On behalf of the entire group of senior citizens, Dr. Nicholas A. Madler of Greeley, who was President of the Society in 1934-35, delivered a brief acceptance speech. It is reproduced here in full:

"Mr. President, fellow members of the Colorado State Medical Society, and guests:

"It is a compliment to have been asked to speak for this group of men and women to whom you are doing honor tonight. To some of you fifty years may seem an awfully long time but if you will have the good fortune or misfortune, whatever way you look at it, to live and work as long as we have, you will find that fifty years is but a short time as time goes. In retrospect, the long years ago become but yester years and if it were not for the fact that the flesh is now weak when the spirit is still so willing, we would not know that we had reached and passed the half century mark.

"It is true that the privilege of serving mankind for fifty years or more comes to but few of us in the medical profession. But this is not so because of voluntary or arbitrary retirement at an earlier age. It is because the practice of medicine is so time consuming, so arduous, so self-sacrificing, albeit self-satisfying, that the busy, conscientious doctor has little time to consider himself or his family. So he becomes disregardful of his health and dies in his younger years, most frequently of coronary artery disease. Oh, yes, some of us play a little golf, fish a little or hunt a little, or even spend a little time with the wife and children, but most of us have no hobby whatsoever.

"We do not practice what we preach. We tell our patients, 'Don't do as I do but do as I tell you.' Most doctor's day is twenty-four hours long and he still has a seven day week instead of four or five days as is the case with most workers, in or out of professions. And now some labor leaders are already beginning to dream and talk of a two day week.

"But let's look at ourselves a moment! Is this total subjection of ourselves to our profession necessary and desirable? Are we sacrificing ourselves and our families wholly and only for the good of the patient? Or might it not be a bit due to the fact that most of us consider ourselves little tin gods and thrive and revel in the adoration and adulation of our patients? You know that that sort of flattery, if we but let it, could, over the years, make itself as necessary for our happiness and well being as food and drink, or as dangerous as the addiction to alcolhol or morphine.

"But neither do I like the other extreme— the 'forty hour weekers' as I call them who close up shop Friday night or Saturday noon and make themselves unavailable to their patients until Monday morning. They forget or want to forget, that the patient is still a human being and not a machine; as liable to become sick or get hurt over the week end as well as on week days. They also forget, and so do medical schools forget to teach their students, that the successful practice of medicine depends as much on the art of practice as on the science of practice. A patient is first and foremost a human being, with a heart and a soul, both of which have to be catered to if the doctor wants to have the pleas-

ure of seeing him recover. There must be a happy medium between these two extremes in the successful practice of medicine and it should not be too hard to find if we but use the common sense that most of us have been so generously endowed with by our Creator.

"And while we are speaking of likes and dislikes, I believe that it is becoming all too prevalent to let the laboratory and machines, as valuable as they are, make the diagnoses for us. Instead of spending sufficient time listening to the patient and getting a good history, properly evaluating what we have been told and using the auxiliary services as corroboratory or noncorroboratory evidence of our working diagnosis, we put the cart before the horse and make our thinking fit the presumptive diagnosis made by the machines. All too often we have the patient subjected to the inconvenience and expense of many laboratory procedures, necessary or unnecessary, before we have listened to his complaint and examined him. And then we are all too prone to let the laboratory findings influence our judgment. If this trend continues, we are apt to lose the mental capacity with which we have been endowed just as we are about to lose the use of our legs by forgetting how to walk. What then is to prevent the patient of the future from dropping a coin in a machine which then comes up with a diagnosis and dispenses the medicine to be taken just like Coca-Cola and other machines dispense their wares? This prediction is no more ridiculous than some of the diagnoses you have seen made by men who are too busy or too physically and mentally lazy to use their God-given senses with which they have been supplied.

"Fifty years or more in the practice of medicine! What wonderful years they have been for all doctors and particularly for those of us who have been witness to the new discoveries in the field of medicine and their application in the amelioration of human suffering and the prolongation of human life. But what worries me is that, while we have been able to lengthen the span of human life by twenty to twenty-five years, we have not been able to completely satisfy man with those material and spiritual needs which make for happiness and contentment during the added years of his life. What profits a man to live an added ten or twenty years if during that time he is unhappy because of poor health, the need of a job, the fear of war and poverty and the need of a firm belief in God and His eternal goodness. For no man need fear to live or die if he is free of all fear and firm in his conviction that his present life is but a prelude to a far happier and eternal life to come —in union forever with his loved ones and with his God.

"In conclusion, let me thank you most heartily in behalf of all of us who have been the recipients of your generosity and your esteem. May the years to come be as enjoyable to all of you as the years gone by have been to us and may all of you live to enjoy fifty years of practice in a profession in which it is much more blessed to give than it is to receive."

FARM/CITY WEEK SCHEDULED FOR OCTOBER 23-29

Local medical societies are being urged by the American Medical Association to help build better relationships between farm and city groups by participating in the observance of the Farm/-City Week, October 23-29. During this week, member organizations of the Farm-City Conference (an alliance of leaders in industry, agriculture and the professions) are pitching in on a program designed to promote mutual understanding between town and rural people of their economic problems and civic responsibilities. This week provides an excellent opportunity for a medical society to assert its civic leadership and to inform the public of its many services.

Here are several ways in which your society can contribute to the success of this plan: (1) develop health education programs for city and rural youth groups; (2) schedule addresses by society members to civic groups; (3) plan radio and television interviews and discussions; (4) arrange tours of hospitals, clinics and other facilities by farm and city groups, and (5) instigate vocational guidance programs in secondary schools.

Contact your local Kiwanis Club to coordinate your program into the community-wide observance. If no club exists in your area, the Farm-City National Committee requests your society and other interested groups to initiate the leadership in planning for Farm/City Week.

Cancer, heart disease, tuberculosis, and diabetes can be discovered and brought under management long before their victims are aware that anything is wrong.—Ward Darley, M.D., J.A.M.A., April 30, 1955.

While there is profound disagreement concerning the importance of acquired immunity, no one questions the importance of natural resistance in tuberculosis. It is clear that each individual possesses innate characteristics which determine the manner and intensity of his tissue response to the presence of tubercle bacilli. Clinical observations reveal that physical and mental fatigue, metabolic disorders like diabetes and starvation, and many other non-specific physiological disturbances often undermine resistance, while healthful conditions of living increase it. All this was well known fifty years ago; among the problems of which he urged study, Trudeau listed "above all, the mechanism of natural immunity."—Rene J. Dubos, Ph.D., Nat. Tuberc. A. Tr., May, 1954.

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Gantrisin Diethanolamine q. 8 h.;

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Tonsillitis* in child weighing 40 lbs.

℞ Gantrisin (acetyl) Pediatric

Suspension ℥ iv

S. Initial dose 2 teasp.; then

1 teasp. q. 6 h.

Urinary infections*

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Cystitis* in child weighing 40 lbs.

℞ Gantrisin (acetyl) Syrup ℥ iv

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Ophthalmic Ointment 4%, 1/8 oz

S. Use in eye 3 times

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Colorado Entertains Dr. Lillian Heath

Wyoming's first woman physician, Dr. Lillian Heath, was entertained with a two-day visit to Denver August 28 and 29 by the Colorado State Medical Society. Dr. Heath, about to have her 90th birthday anniversary, had mentioned in a recent interview with the Denver Post that she very much hoped to visit Denver's large modern hospitals while she was still physically able to do so. Learning of this through the Post, the Colorado Society arranged just such a visit for Dr. Heath and her husband, Mr. Louis Nelson.

She was taken on a detailed tour of St. Joseph's, Presbyterian, and Colorado General Hospitals by Dr. Cyrus W. Anderson, President of the Denver Medical Society, and Dr. Wanda Girard, St. Joseph's interne and Denver's youngest woman physician. Dr. Heath observed many hospital procedures and watched one major operation during the tour.

Dr. Heath is the proud prossessor of Wyoming's medical License No. 5 as the fifth physician licensed in that state, as well as its first woman physician. Some of her exciting medical experiences when the West was really "wild 'n wooly" were the subject of a Sunday magazine article in the Denver Post of August 28. She retired from active medical practice immediately following World War I, and while she had kept up with medical progress through avid reading of scientific journals (which incidentally she still does, and she still does not need glasses at 89!) she felt she had missed a great deal in medical progress. As she so aptly commented, "Even though I read about these advances in medicine, there is a void in not being able to take an active part in its progress. I do not know how to thank all of the people who have been so kind to me and to my husband in making the dream of this trip come true."

Dr. Russell I. Williams, President of the Wyoming State Medical Society, joined with Dr. Samuel P. Newman, President of the Colorado Society, in arranging the trip. Dr. Williams arranged for Dr. Franklin Yoder of Cheyenne to escort Dr. Heath and her husband to Denver. Frontier Airlines kindly donated air transportation for the round-trip from Rawlins, and it was the first air trip the couple had experienced. Dr. Newman, Drs. M. Ethel V. Fraser and Elsie S. Pratt, Denver two senior practicing woman physicians, all welcomed Dr. Heath to Colorado and Denver. The Denver Medical Society gave a luncheon for Dr. Heath and the escorting party at the new Denver Medical Library and presented her with a life-time library card. The Colorado State Medical Society extends its thanks to all who participated in honoring Dr. Heath.

Dr. Paul M. Ireland, who was engaged in private practice in Pueblo from 1929 to 1942, and presently director of surgical service in the Veteran Administration Central Office in Washington, D. C., has been appointed manager of the VA hospital in Ann Arbor, Michigan.

A veteran of both World Wars, Dr. Ireland has been with VA since 1946, serving as chief of the surgical service in VA hospitals at Fort Logan, Colorado, and Denver, Colorado, before transferring to the Central Office in 1953 as chief of the surgical division. He was named director of the Central Office surgical service in 1954.

Component Societies

BOULDER COUNTY

Peter Nordlund, legal advisor to the State Medical Society, spoke on legal aspects of practice of medicine at the regular meeting of the Boulder County Medical Society held September 8, at the Boulder Country Club.

Dr. William Bresnahan of Boulder was elected to membership. The next meeting will also be held at the Boulder Country Club.

B. A. YOST, Secretary.

Obituaries

EDNA M. REYNOLDS

Dr. Reynolds died Sunday, September 25, following a long illness. She was 65.

Born June 3, 1890, in Aspen, Dr. Reynolds came to Denver from Leadville in 1905, where she practiced medicine until her retirement in 1949. She was graduated from Colorado University and Colorado Medical School and held a degree from Vienna University. Dr. Reynolds was a member of the Colorado State Medical Society and the Denver Medical Society.

Surviving are her father, W. O. Reynolds of Arcadia, California; a sister, Mrs. Alice Butterworth of Denver; two brothers, Kenneth E. Reynolds of Arcadia, California, and Karl W. Reynolds of Tulsa.

RAY LAWRENCE DRINKWATER

Dr. Ray Lawrence Drinkwater, widely known Denver physician, died Friday, September 23. He was 71.

Dr. Drinkwater had practiced medicine for nearly fifty years before his retirement five years ago. He was born in Chicago and came to Denver with his family as a boy. He attended public school and was graduated from East High School. He later received his degree at the Colorado Medical School. He was a Colonel in the Army Medical Corps during Warld War I and for a time was Chief Surgeon at the Army Hospital in Honolulu. After the war he returned to the practice of medicine in Denver. He also served for several years as President of the State Board of Health and was on the faculty of the CU Medical School.

Surviving are his wife, Mrs. Jean Raine Drinkwater; a son, Terrell C. Drinkwater; a daughter, Mrs. Richard W. Wright of Denver, and four grandchildren.

PAUL R. WEEKS

Dr. Paul R. Weeks, radiologist and staff member of three Denver hospitals, died Tuesday,

Obituaries

(Continued From Page 909)

September 20, at St. Joseph's Hospital after an illness of six months. He was 53.

Born in Martinsville, Indiana, on October 30, 1901, he attended Martin County public schools and later entered the University of Indiana, where he studied medicine. He interned at Indianapolis City Hospital and at Patty-Clay Hospital in Richmond, Kentucky. Later, Dr. Weeks practiced medicine at Thomas D. Dee Hospital at Ogden, Utah. He opened his x-ray offices in Denver in 1938.

Dr. Weeks was called to service in the Navy's Medical Reserve during World War II and was assigned to Mare Island, Calfornia, and later, Pearl Harbor. He was released from active duty in January, 1946.

Dr. Weeks was a member of the Denver Medical Society, Colorado State Medical Society, Denver Medical Club, Colorado Radiological Society and Rocky Mountain Radiological Society. He was a fellow of the American College of Radiology, and a Councilor for the Radiological Society of North America. He was President of the Denver Radiologists Club.

Suriving are his wife, Rcse; two sons, Stephen and Edward of Denver; a stepson, William Hamilton of Chicago; a daughter, Mrs. C. C. Nelson of Cross Plains, Wisconsin, and a sister, Mrs. Leola G. Carter of Terra Haute.

WILLIAM A. ADAMS

Dr. William A. Adams, one of Colorado's better-known medical men, who spent more than a half century in his profession, died at his home at Akron, Colorado, June 3, 1955. Dr. Adams, who would have been 83 years old in July, retired from active medical practice in 1948 after a general practitioner's career dating from 1897.

In that year, he was graduated from Kansas State Medical College. He continued his education with postgraduate work in the field of eye, ear, nose and throat specialization at the University of Illinois. Dr. Adams was a member of the American Medical Association and the Colorado State Medical Society. He was one of the founders of the Fort Morgan Medical Society and of the Washington-Yuma Counties Medical Society. He was also a Past President of the Washington Yuma Counties Medical Society.

Dr. Adams practiced in Easton, Kansas; Denver, Colorado, and Akron, Colorado.

He is survived by his wife and two daughters.

FRANKLIN P. GENGENBACH

Dr. Franklin P. Gengenbach of Denver died in late August at the age of 79.

Dr. Gengenbach was born in Philadelphia October 13, 1875, and came to Denver in 1901 as one of the city's first pediatricians. He was graduated from the University of Pennsylvania School of Medicine, and studied pediatrics in 1908 in Berlin and Vienna.

He was Emeritus Professor of Pediatrics at the University of Colorado Medical School and a diplomate of the American Board of Pediatrics. During World War I Herbert Hoover appointed Dr. Gengenbach to the National Committee on Children in Wartime.

Dr. Gengenbach is survived by his daughter, Mrs. Margot G. Hicks, of 363 Bellaire Street.

Wyoming

Physicians Fish

You will recall last year that in the Pfizer Laboratories Wyoming and Montana Physicians' Trout Fishing Tournament Wyoming made a good showing.

In the second report period for 1955 it is evident that Wyoming physicians were able to lure fish better than ever. Dr. Edward Callaghan of Riverton, Wyoming, caught a 24-inch Rainbow to lead Division Number 2 which includes trout caught on spinners, lures and live bait in a river, stream or creek and all lake trout. Third in this division with a 21-inch German Brown was Dr. Ralph Shwen of Cheyenne. Eighth and tenth places were occupied by Drs. R. D. Tebbet and F. H. Haigler, both of Casper, the former with an 18½-inch German Brown and the latter with an 18-inch Mackinaw.

In Division 1 which includes trout caught on a fly (only) in a stream, river or creek, Dr. Claude Raffl of Basin placed second with a 23-inch Rainbow. Dr. G. H. Phelps of Cheyenne placed fifth with a 19½-inch German Brown, and Dr. Brendan Phibbs of Casper sixth with an 18½-inch Rainbow. First prize in this division was won by Dr. G. B. LeTellier, Lewistown, Montana, with a 23¼-inch Rainbow.

OMAHA-MIDWEST CLINICS

The Twenty-Third Annual Assembly of the Omaha Mid-West Clinical Society will be held October 24, 25, 26, 27, 1955, in Omaha at the Hotel Paxton featuring eleven guest speakers of national repute and thirty-six additional lectures by faculty members of the University of Nebraska College of Medicine and of Creighton University School of Medicine.

This course of study has been approved by the American Academy of General Practice for 37 hours of postgraduate instruction. An all-inclusive registration fee of $7.50 will be charged. For further information contact James J. O'Neil, M.D., Director of Clinics, 1031 Medical Arts Building, Omaha, Nebraska.

During the past two decades, there have been reports of human-type tuberculosis infection of cattle in various parts of the world, usually among animals on farms where tuberculous employees were in contact with them. Human-type tuberculosis causes cattle to react to the tuberculin test but does not produce generalized disease.—James H. Steele, D.V.M., Pub. Health Rep., Nov., 1954.

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Colorado Medical Service and Colorado Hospital Service offer sincere congratulations on the outstanding success that you, the doctors and hospitals of Colorado, have made of the Blue Cross and Blue Shield Plans.

Blue Cross and Blue Shield, under your sponsorship and guidance, now serve nearly half of all the residents of Colorado. These two plans have done a great deal to maintain the principles of free enterprise in the Colorado hospital system and to maintain the freedom of the people of Colorado to choose which doctor shall serve them.

In addition, under the guidance of Colorado doctors and hospital administrators, Colorado medical and hospital practices have established a proud record of achievement.

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WHAT'S GOING ON

in your community that would be of interest to readers of the Rocky Mountain Medical Journal?

We will be happy to carry news about your own component society—programs that you have established that you have found effective—news of interest to our Rocky Mountain States about individual doctors or hospitals.

We can't print it unless we know about it!

We can't have any rule of thumb that all patients with tuberculosis will react in a certain way. The reaction depends entirely upon what the disease means to the individual.—Frank E. Coburn, M.D., Nat. Tuberc. A. Tr., May, 1954.

Considering the fact that hospital admissions have been repeatedly found to have more tuberculosis than the general population, there can be no doubt that this patently sick and infirm group is fertile soil for case finding.—Theodore L. Badger, M.D., Bull. Nat. Tuberc. A., June, 1955.

Unhealed necrotic lesions persist indefinitely in a tuberculos patient who has regained clinical health. The possibility that these lesions may undergo a long-delayed liquefaction and slough makes it appear that they are usually the source for relapses of the disease.—E. M. Medlar, M.D., Am. Rev. Tuberc., March, 1955.

Colorado Hospital Association

Annual Meeting Colorado Hospital Association

The Colorado Hospital Association will hold its annual meeting October 25-26 at the Cosmopolitan Hotel in Denver. The general theme of the meeting will be "The Care of the Chronically Ill, and the Aged." A panel of speakers has been arranged, which will be composed of the following individuals:

Mr. Charles K. LeVine, President of the Colorado Hospital Association, Beth Israel Hospital, presiding.

Medicine—Dr. Jacob Horowitz, Director of Hospitals, Denver General Hospital.

Welfare—Mr. Guy Justis, Director of Colorado State Department of Public Welfare.

Housing—Dr. Byron Johnson, Associate Professor, Department of Economics, Denver University.

Hospitals—Mr. W. J. Dye, Administrator, Mennonite Hospital, La Junta, Colorado.

Nursing Homes and State Program—Dr. Joseph E. Cannon, Chief, Chronic Disease and Tuberculosis Section, Colorado State Department of Public Health.

Rehabilitation and Vocations Guidance—Mr. William C. Weidener, State Supervisor of Vocational Rehabilitation, Colorado State Board for Vocational Education.

Creative Activities and Their Health Implications—Mr. Heber Harper, Consultant in Gerontology, Denver University.

Dr. Heber Harper will be the guest speaker at a luncheon on October 25. Dr. Leroy M. Bates, Assistant Secretary and Consultant on Professional Practice, A.H.A. of Chicago, has been invited to be the guest speaker on October 26 at a luncheon sponsored by the Blue Cross. Also invited to give a talk at the business meeting the afternoon of October 26 will be Mr. John L. Myers, Director, Colorado Educational and Health Agencies for Surplus Property, who will discuss surplus property as it applies to hospitals. Also on the program are Mr. Louis Liswood, National Jewish Hospital, Denver; Mr. J. R. Peterson, President-Elect, Larimer County Hospital, Fort Collins, and Mr. Richard MacLeish, Executive Secretary, Colorado Hospital Association and Hospital Consultant Service.

ASSISTANCE GRANTS OFFERED FOR NEW MEDICAL PRACTICES

A helping hand to physicians in need of financial assistance to establish medical practice units is being offered by the Sears-Roebuck Foundation in cooperation with the American Medical Association. Since young physicians often lack capital and business "know-how," this plan is intended to fill the gap with long-term, low-cost assistance. Unsecured ten-year loans of up to $25,000 will be offered to physicians seeking to establish practices but unable to get full local financing. One loan in each of five regions in the country will be given in 1955 under an original $125,000 Foundation grant.

Especially planned for small or medium sized towns and growing or rural communities, the program is designed to be self-expanding. All repayments will be used for further grants.

Applications will be screened by a medical advisory board which has been appointed from nominations by the A.M.A. Board of Trustees. Each applicant must submit information about the area where he intends to locate, indicating the need for medical care, medical resources already available, possible reasons for the success of a new practice, and benefits expected for the community.

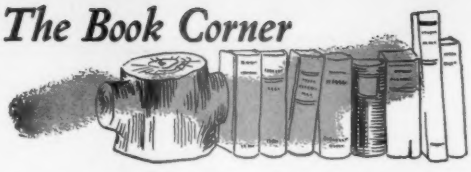
State medical society physicians placement services will play a major role in getting the program started. The plan, formulated by the recently created Medical Advisory Board, is headed by two members-at-large: Dr F. J. L. Blasingame, Wharton, Texas, chairman, and Dr. Edwin S. Hamilton, Kankakee, Illinois, vice chairman. Regional members include Drs. Samuel P. Newman, Denver, Midwest; James Z. Appel, Lancaster, Pennsylvania, East; David Henry Poer, Atlanta, South; Eugene F. Hoffman, Los Angeles, Pacific Coast, and Robert D. Moreton, Fort Worth, Southwest.

Applications should be sent to the office of the region in which the proposed medical practice is to be established. They should be addressed to the Director, Sears-Roebuck Board, at these locations: Pacific Coast Region—2650 Olympia Boulevard, Los Angeles 54; Southwestern—1409 South Lamar Street, Dallas 2; Midwest—8 East Congress Street, Chicago 5; South—675 Ponce de Leon Avenue, Atlanta; East—4640 Roosevelt Boulevard, Philadelphia 32.

ELECTIONS

Your State's Executive Office appreciates being notified of the results of your component society elections. Not only can State Secretaries thus keep their records up to date, but they are better able to route inquiries to the appropriate component society officer.

The Book Corner



Special Notes From the Library

The Library recently received a gift from Dr. Kenneth H. Beebe, of Sterling, Colorado. The Doctor presented a copy of Anesthesia in General Practice by S. C. Cullen, 4th ed., 1954; this was given in memory of Dr. Benjamin H. Battock, who passed away in April of this year.

The Library again was the fortunate recipient of a gift from Dr. F. T. Candlin (D.V.M.). Dr. Candlin gave the Library an enviable collection of periodicals in the field of Veterinary Medicine. The collection consists of the Journal of the American Veterinary Medical Association, 1945-1955; North American Veterinarian, 1943-1953, and Veterinary Medicine, 1945-1953. The gift was appreciated very much because for some time now we have wanted to start a collection in the field of veterinary medicine. It is hoped that in time this collection will grow and be used not only by the doctors of veterinary medicine but by our other library patrons as well.

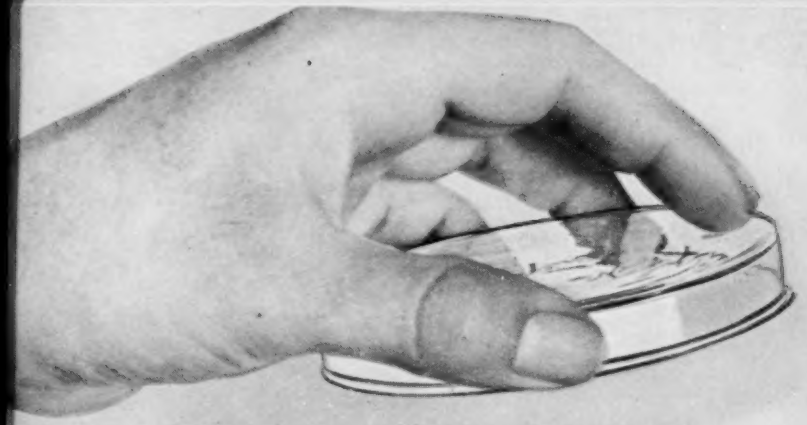
New Books Received

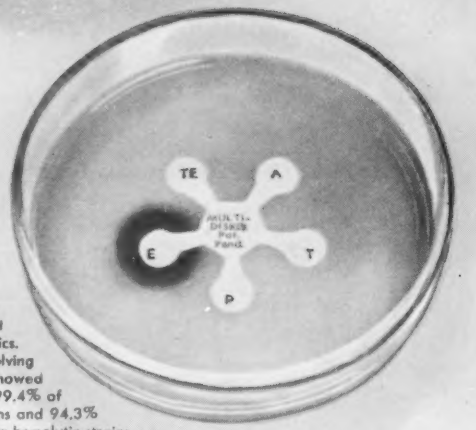
New books received are acknowledged in this section. From these, selections will be made for reviews in the interests of the readers. Books here listed will be available for lending from the Denver Medical Library soon after publication.

The Body Fluids: Basic Physiology and Practical Therapeutics: By J. Russell Elkinton, M.D., Associate Professor of Medicine; Chief of the Chemical Section of the Department of Medicine, University of Pennsylvania School of Medicine; Ward Physician, Hospital of the University of Pennsylvania; and T. S. Danowski, M.D., Renziehausen Professor of Research Medicine; Senior Staff Physician at the Children's Presbyterian-Women's and Elizabeth Steel Magee Hospitals, University of Pittsburgh School of Medicine. 626 pages. Published by The Wiliams & Wilkins Company, Baltimore, 1955. Price: $10.00.

Counseling in Medical Genetics: By Sheldon C. Reed, Director, Dight Institute for Human Genetics, The University of Minnesota. 268 pages. Published by W. B. Saunders Company, Philadelphia, 1955. Price: $4.00.

The Prevention of Disease in Everyday Practice: By Isadore Givner, B.S., M.D., F.A.C.S., Associate Clinical Professor of Ophthalmology, New York University Post-Graduate Medical School; Director of Ophthalmology, New York City Hospital; Attending Ophthalmologist, University and Beth David Hospitals; Associate in Ophthalmological Bacteriology, New York Eye and Ear Infirmary; Consultant in Ohpthalmology, Correction Hospitals; and Maurice Bruger, M.Sc., M.D., C.M., F.A.C.P., Associate Professor of Medicine, New York University Postgraduate Medical School; Attending Physician and Director, Department of Clinical Pathology, University Hospital; Visiting Physician, Bellevue Hospital and Contributors. With 50 text illustrations, frontispiece in color. 964 pages. Published by the C. V. Mosby Company, St. Louis, 1955. Price: $20.00.





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This blood agar plate shows a strain of *beta* hemolytic enterococcus. Note extreme sensitivity of this organism to ERYTHROCIN—yet it easily resists the other antibiotics. Additional data: A study[1] involving 202 enterococcic strains showed sensitivity to erythromycin in 99.4% of *alpha* hemolytic strains and 94.3% of *beta* hemolytic strains.

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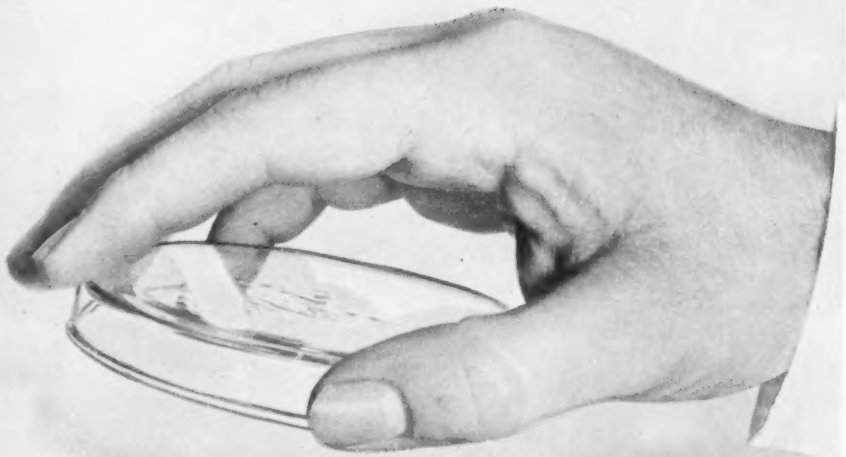

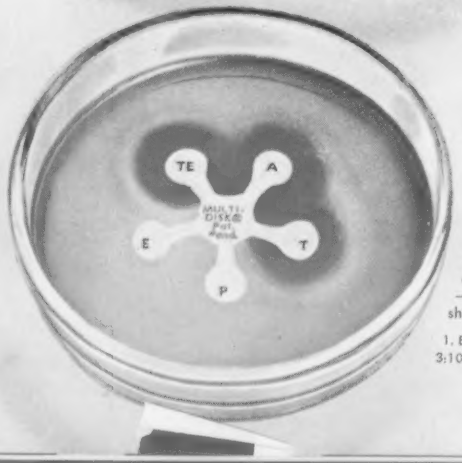

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1. Eisenberg, et al., Antib. & Chemo., 3:1026-1028, Oct., 1953.

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Bone and Bones, Fundamentals of Bone Biology: By Joseph P. Weinmann, M.D., College of Dentistry, University of Illinois; formerly at School of Dentistry, Loyola University, Chicago; and Harry Sicher, M.D., D.Sc., School of Dentistry, Loyola University, Chicago. With 302 illustrations, 508 pages. Second Edition. Published by The C. V. Mosby Company, St. Louis, 1955. Price: $13.75.

Book Reviews

Advances in Pediatrics, Vol. VII, 1955: S. Z. Levine, Editor. 351 pages. The Year Book Publishers, Inc. Price: $8.00.

Seven monographs are presented in Volume VII of Advances in Pediatrics. They fully maintain the previous high standards of this series of annual reviews. The subjects are quite diversified and are of contemporary and future importance, both to the research pediatrician and to the physician who cares for children in his daily practice. Each author is a recognized authority in his field.

The monographs are as follows: (1) On Fibrous Defects in Cortical Walls of Growing Tubular Bones: Their Radiologic Appearance, S'ructure, Prevalence, Natural Course, and Diagnostic Significance, by John Caffey. (2) The Urinary Tract in Childhood, by Meredith F. Campbell. (3) Malnutrition in Infancy and Childhood, with Special Reference to Kwashiorkor, by Gomez, Galvan, Cravioto, and Frenk (Mexico). (4) Phonocardiography in Children, by Edgar Mannheimer (Stockholm). (5) Infantile Cerebral Palsy, by Meyer A. Perlstein. (6) Mucoviscidosis, by Harry Shwachman et al, and (7) Congenital Megacolon, by Orvar Swenson.

ROBERT W. COLLETT, M.D.

Textbook of Obstetrics, 11th Eddition: By Greenhill.

The Textbook of Obstetrics by Greenhill needs no introductions. It has been one of the leading student guides and reference books for many years since its first introduction by DeLee in 1913. The 11th edition, published in 1955, has been revised to bring the book up to date. Current literature has been reviewed and incorporated into the general outline which remains the same as in the 10th edititon.

New data have been added on the physiology of the fetus and newborn in reference to disturbances of the thyroid gland and diabetes, the toxemias of pregnancy noting therapy with the veratrum compounds, fibrinogen depletion as a cause of obstetrical hemorrhage, acute infectious diseases in pregnancy, pulmonary tuberculosis, the lower nephron syndrone, pulmonary hyaline membranes, retrolental fibroplasia and cerebral palsy.

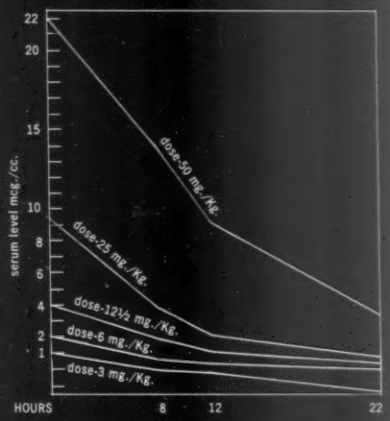
New chapters have been added on roentgenology in obstetrics, describing in more detail and with illustrations Snow's technic of x-ray pelvimetry, analgesia and anesthesia, adding discussions of sodium pentothal and trichlorethyline to the last edition; induction of labor listing indications and describing methods both medical and surgical, erythroblastosis and the Rh factor, diseases of the nervous system and prolonged labor.

A separate and interesting chapter on endocrine diseases with particular reference to association with pregnancy has been included.

GEORGE M. HORNER, M.D.

Communicable Diseases, Third Edition: By Franklin H. Top, A.B., M.D., M.P.H., F.A.C.P., F.A.A.P.,

Mean Serum Levels After Intramuscular Injection of Terramycin.



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O'Regan, C., and Schwarzer, S.: J. Pediat. 44:172 (Feb.) 1954.

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F.A.P.H.A. 109 text illustrations and 15 color plates. Published by C. V. Mosby Company. Price: $18.50.

This comprehensive volume has much that is very similar to previous editions, with five new chapters added on: Sulfonimides and Antibiotics, Anthrax, Histoplasmosis and Cat Scratch Fever. Rewritten chapters on Atypical Pneumonia and Viral Hepatitis add to the new edition.

The text remains as a tribute to the author's extensive clinical and epidemiologic experience, thus the volume has earned the right to be considered one of the standard up-to-date reference sources on communicable disease.

WARD L. CHADWICK, M.D.

Primary Anatomy (Third Edition). By H. A. Cates, M.B., and J. V. Basmajian, M.D. Published by Williams & Wilkins, Baltimore, 1955. 339 pages, illustrations. Price: $5.75.

General remarks after a review of "Primary Anatomy," by Cates and Basmajian.

1. Photographs of surface anatomy good.

2. Feel the reference to the evolving of man in the introduction is not relevant to the subject especially since it is a controversial subject.

3. A classification of blood as a tissue seems to be omitted.

4. I feel that the chapter on the introduction is very well done for the most part and the drawings are quite good.

5. The remarks on embryology at the beginning of the book instead of at the end are noteworthy in my opinion.

6. I believe the authors use definitely the right approach in presenting primary anatomy from the systematic approach.

7. I wonder if the division into eleven systems is desirable and believe it is the exception rather than the rule.

8. There is an error in the legend of drawings 67 and 68 which appear to be interchanged.

9. The chapter on the articular system is very good but may be a little detailed for a beginning course.

10. Feel too much material given to the skeletal, articular, and muscular systems, with the other systems being cut short, especially the urinary and reproductive systems.

11. Question the value of having the reproductive system before the nervous in chapter organization.

12. There is a dearth of material on receptiors other than the eye and ear.

13. A representation of the skin and endocrine systems is good but very little material concerning them.

14. The book seems to be more slanted to physical education students than to other groups, e.g. nurses, because of more emphasis being placed on the skeletal and muscular systems.

WALDEN V. KURTZ,
Instructor, University of Denver.

The Biologic Effects of Tobacco: With Emphasis on the Clinical and Experimental Aspects: Edited by Ernest L. Wynder, M.D., Head, Section of Epidemiology, and Associate, Sloan-Kettering Institute for Cancer Research. Foreword by Joseph Garland, M.D., Editor, The New England Journal of Medicine. 215 pages, illustrated. Boston, Little, Brown and Company, c1955.

The purpose of the book, is to present to proponents for and against smoking "what knowledge there is on the subject and the privilege of making their own decisions in regard to the relative importance to themselves of the risks involved."

The authors have critically reviewed the more recent works on the effects of tobacco consumption on the cardiovascular system, neoplastic diseases, the gastrointestinal tract and allergic phenomena. They have tried to be highly impartial in their conclusions and have, in the reviewer's opinion, leaned over backwards to avoid any unwarranted conclusions.

Just a quick glance at the varied effects of tobacco on the body should convince one that "it ain't good."

ABE RAVIN, M.D.

WANTADS

FOR SALE: 4 lead Beck-Lee Photographic Electrocardiograph. Price $50.00. Robert B. Perry, M.D., Graden Building, Durango, Colorado.

FOR SALE: Eye, Ear, Nose and Throat equipment and instruments at a reasonable price. Retired. Mostly in good condition. Frederick G. Fox, M.D., 625 Jefferson St. N.E., Albuquerque, New Mexico.

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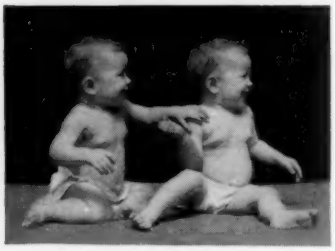

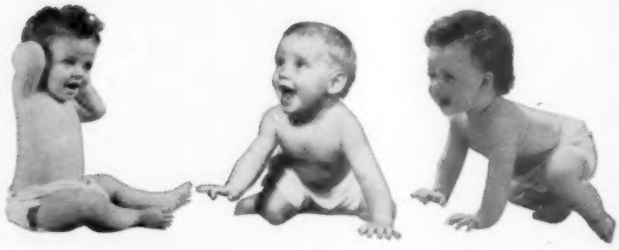

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(1) Jeans, P. C., in A. M. A. Handbook of Nutrition, ed. 2, Philadelphia, Blakiston, 1951, pp. 275-278.

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